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My thesis composition, *Singing on the Grassland*, is written for flute and string quartet. My main innovation is flexibly applying two different Mongolian vocal styles—Long-song and Höömii in each section. Through deeply studying Mongolian vocal styles, I discovered the similarities and the differences among them. First of all, the modal scheme mostly remains the same—most Mongolian vocal music is composed in a pentatonic scale. However, the dissimilarities also stand out in two vocal styles, such as the intervallic relationships, ornaments, dynamic changes and phrase length.

I discovered possibilities in combining the characteristics of Mongolian vocal music with twelve-tone technique. In order to keep and mix two different musical styles, I created a matrix and applied it throughout the whole piece. This innovative project shows my continuing explorations to harmonize Mongolian music with western atonal music. I will continue working on this idea: combining Mongolian musical culture with western traditions.

SINGING ON THE GRASSLAND

by

Binshan Zhao

A Thesis Submitted to
the Faculty of The Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Master of Music

Greensboro
2016

Approved by

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Committee Chair

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APPROVAL PAGE

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Date of Acceptance by Committee

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I would like to sincerely thank my adviser Dr. Mark Engebretson for all of his valuable guidance. I would like to express my gratitude to Dr. Alejandro Rutty and Dr. Gregory Carroll for their time and support. And finally, I want to thank my wife, Luyin Shao, for her advice and encouragement during the creation of this thesis.

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CHAPTER I

INTRODUCTION

My thesis composition, a fifteen-minute chamber piece titled *Singing on the Grassland* is written for a flute and a string quartet. As a native Mongolian and a modern composer, the two main musical influences on my work are nationalism and modernism. On the one hand, I recall my childhood memories of Mongolian vocal music styles—Long-song and Höömii. These vocal styles are characterized by their distinctive vocalization, free rhythm, and intervallic relations. On the other hand, the ideologies and techniques of serialism and modernism also provide abundant methodologies for composing music. In my thesis composition, I use a matrix to organize the characteristics of Mongolian vocal music. As audiences listen, the folk-style themes will catch their ears first, and then they can find other non-folk details beneath the musical flow. Different styles or genres harmonize together, creating a multi-layered structure.

This idea of plurality can also be found in my other works. During my master's study, I have explored the possibilities of applying techniques of modernism to folk music in pieces such as *Typing Three Chinese Poems*, *Impression Shona*, and *Summer of Grassland*.

CHAPTER II

BRIEF CONTEXT OF MONGOLIAN VOCAL MUSIC

Inner Mongolia Autonomous Region, a province of the People's Republic of China, is located in the north of the country, bordering Mongolia and Russia. It was established in 1947, and is the third largest subdivision of China. Its capital is Hohhot. The population in the region is mainly composed of Han Chinese and Mongol minority; the official languages are mandarin and Mongolian.[1]

Long-song and Höömii (throat-singing) are two representative vocal styles in Mongolian music. Long-song is one of the most distinctive and historical genres. The characteristics of long-song can be generated as: melodious, free rhythm, large format and short lyrics. Its texts reflect the beauty of the prairie, the pang of being homesick and the joys of life. Thus, long-song became one of the fixed repertoires in some gathering events.

Höömii (throat-singing; overtone-singing) is a vocal style in which a single performer produces more than one voice simultaneously. There are several styles of throat singing: the Mongolian and Tuva Höömii are the mainstreams in middle Asia.

In Mongolian style (or melodic overtone-singing style), a drone is produced as the fundamental, with a flute-like melody produced by the tongue as the upper harmonics or

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1 China Today "Inner Mongolia Autonomous Region." http://www.chinatoday.com/city/inner_mongolia.htm [accessed April 4, 2016

overtones. In Tuva style (or non-melodic overtone-singing style), the upper overtones change with the pitch of the fundamental drone.

A number of theories describe Long-song and Höömii in Inner Asia. Overall, we can divide these theories into two groups: theories about origins and the theories about vocal techniques. In *Mongolian Conceptualizations of Overtone Singing*, Carole Pegg writes about Höömii's origin "is attributed to the unusual natural features of this sum: the mountains, lakes, rivers and birds. This 'natural' origin is also linked, however, with the supernatural or magical."[2] She also points out that singing Höömii requires the intensive control of body and strength, so the training should start at the young age.

All the studies about Höömii origins and techniques provide the scientific explanations of its vocalization methods, creating academic ways to practice and train beginners.Long-song is the common heritage of Mongolian people from all regions. Each tribe or region is distinguished by its dialects, customs and habits. The general melodic structure of Long-song is characterized by its lengthy vocalization and free rhythm.

Typically, a melody starts with a long phrase, and then the ascending melody keeps on one tone for several seconds. Finally, the singer shuts down the voice and lets the lingering sound leave a lasting impression on himself and the audiences. Ornaments and fermata are gradually added in the melodic line along with the approaching of the musical climax.[3]

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[2] Carole Pegg, "Mongolian Conceptualizations of Overtone Singing (xöömii)." *British Journal of Ethnomusicology* 1 (1992): 40.

[3] Lanjie Wu, "Chinese Mongolian Long-song." *The Central Music College Press* (2012):1-2.

CHAPTER III

MATRIX WITH MONGOLIAN VOCAL MUSIC

As a part of my composition process, I researched Mongolian vocalists and theorists, collecting recordings during my fieldwork. I also analyzed specific pieces from oral traditions. I interviewed native Mongolian musicians, trying to obtain their authentic views about characteristics of Mongolian vocal music. My research helped me reach my goal, which was to abstract the main characteristics of Mongolian vocal music, and then nimbly apply them in my work. In the present document, I share the results of my study: "reconstructing" some Mongolian musical features to coordinate with western compositional techniques.

One distinctive feature of Mongolian vocal music is the use of multi-tonal centers in a particular pentatonic system. The Mongolian pentatonic system is closely related with the Chinese Han music, because they are both based on major or minor pentatonic scales. For example, there are five possible tonics in the C major pentatonic scale. Each note can be regarded as central to develop a new scale.

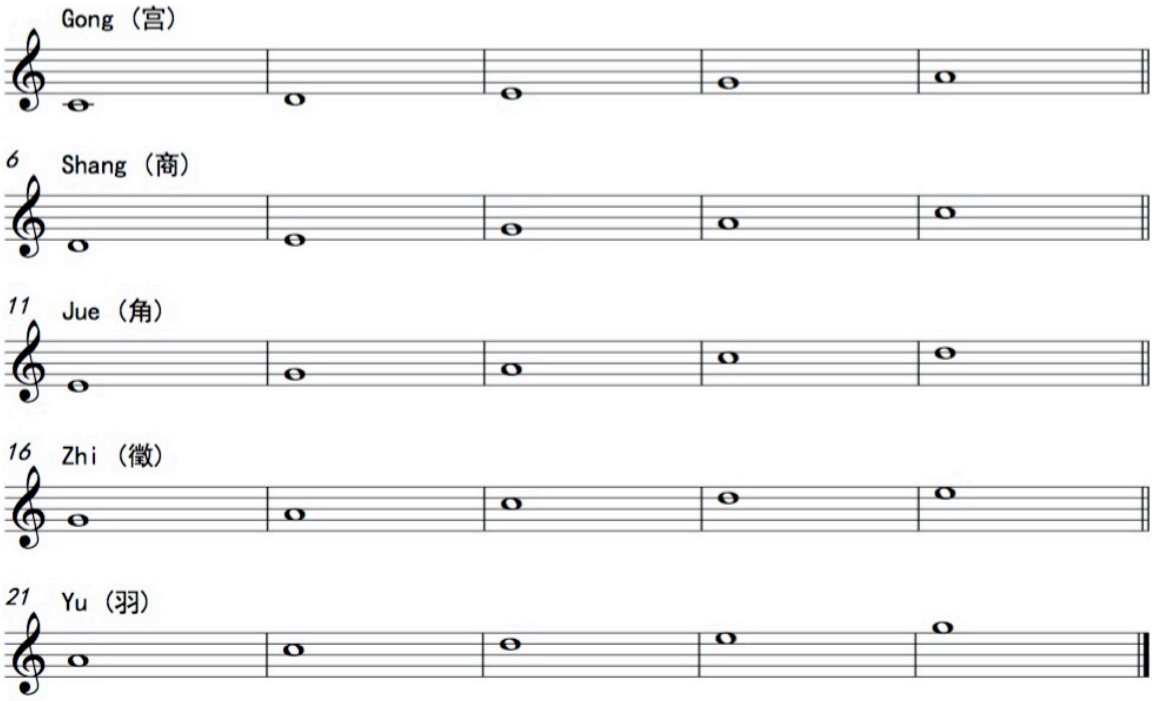

Figure 1. Pentatonic System

In this way, modulation can be made smoothly and quickly. A song usually starts with one of three basic scales—Shang (商), Zhi (徵) and Yu (羽). As the melody develops, the tonic can move to other degrees of the scale. Thus, there may be multi-tonality in one piece.

Using this feature, the Mongolian pentatonic system can be combined with the twelve-tone technique. By the way of precise design, each row can be divided into groups of different tonal area. I created a tone row that contains 4 groups or tonal centers that use special intervallic characteristics that can break into small groups that either provide a sense of tonal center, or relate to the special scale patterns of Mongolian music.

For example, we can find a four-note group in the P0 row: C, E, A, B. This group starts at D and constitutes a major sixth with the last note B, we may regard it as part of the D major pentatonic scale.

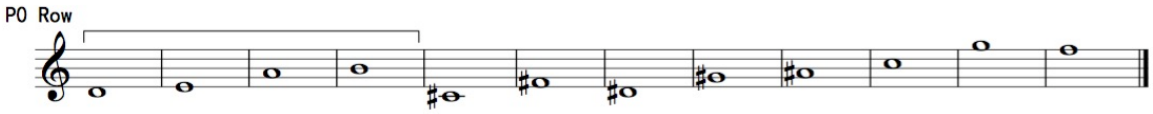

Figure 2. The Four-note Group (D Pentatonic Scale)

There are two five-note groups in the P0 row. The first group includes E, A, B, C#, F#. It is A pentatonic scale.

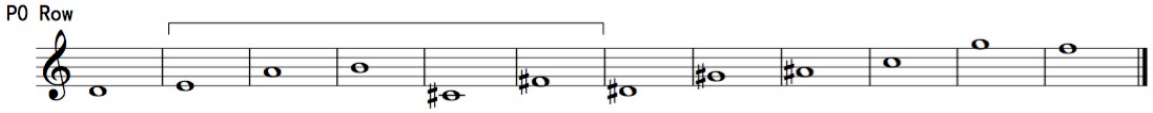

Figure 3. The Five-note Group (A Major Pentatonic Scale)

The second five-note group includes C#, F#, D#, G#, A#. It shows the characteristics of F# pentatonic scale.

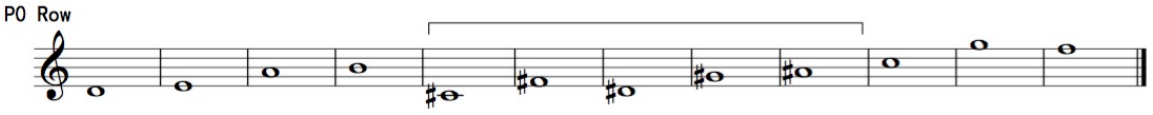

Figure 4. The Five-note Group (F# Pentatonic Scale)

At the end of the P0 row, there is a three-note group (C, G, F), which could be considered as part of the C pentatonic scale.

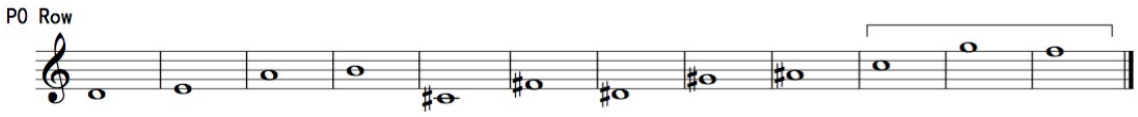

Figure 5. The Three-note Group (C Pentatonic Scale)

Overall, we can find four different tonal centers in the P0 row. It allows me to modulate within one row for each motive of *Singing on the Grassland*. Also, the P0 row closely present the Mongolian vocal music is the use of multi-tonal centers in one Mongolian vocal music

Another distinctive feature of Mongolian vocal music is its intervallic relationships, especially for the combination of step-wise motion and skip motion. For example, in most Mongolian melodies, a step-wise motion usually follows an octave skip (in opposite direction). In my work, I apply this characteristic to create two-note groups and three-note groups.

The two-note groups are featured as major second intervals. Similarly, there is a special Mongolian music motive based on major second. It usually goes up an octave, and then goes down a major second. The inversion, retrograde and retrograde inversion are commonly used in Mongolian vocal music. Through using two-note group, I can easily present this special Mongolian music motive in my piece.

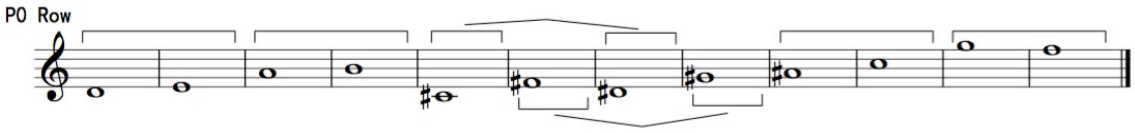

Figure 6. Two-note Groups in P0-Row

There are three different types of three-note groups. All three types include a major second and either a perfect fourth or perfect fifth. This combination shares the same intervallic relationships with Mongolian melodies.

In the first type, the melody normally goes up a major second, and then continues the upward motion with a perfect fourth.

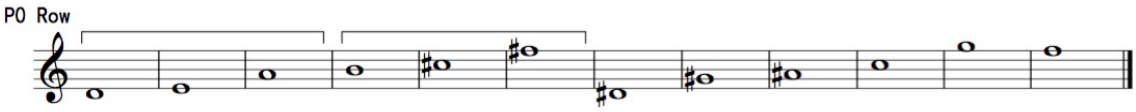

Figure 7. The First Type of Three-note Group in P0-Row

In the second type, the melody normally goes up a perfect fourth, and then continues up a major second.

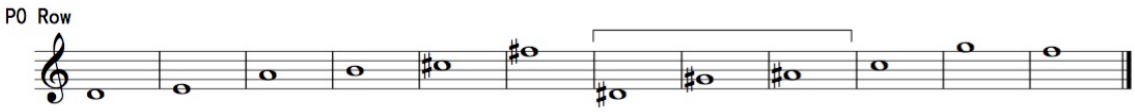

Figure 8. The Second Type of Three-note Group in P0-Row

In the third type, the melody goes up a perfect fifth, and then goes down a major second.

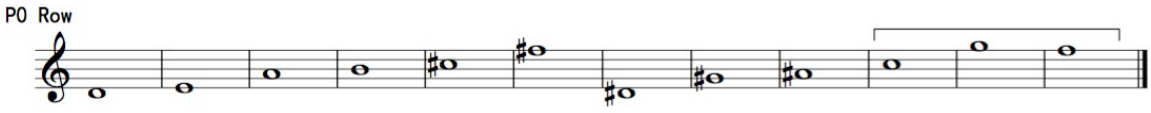

Figure 9. Third Type of Three-note Group in P0-Row

After creating and arranging the P0 row based on the ideas of multi-tonal centers and specific intervallic relationships, I constructed a matrix ("Mongolian" Matrix) to show all the details. In order to enrich the music materials of my piece, I also use the variants generated by the inversion, retrograde and retrograde inversion of the matrix.

	P→											←R
I↓												
	0	2	7	9	11	4	1	6	8	10	5	3
	10	0	5	7	9	2	11	4	6	8	3	1
	5	7	0	2	4	9	6	11	1	3	10	8
	3	5	10	0	2	7	4	9	11	1	8	6
	1	3	8	10	0	5	2	7	9	11	6	4
	8	10	3	5	7	0	9	2	4	6	1	11
	11	1	6	8	10	3	0	5	7	9	4	2
	6	8	1	3	5	10	7	0	2	4	11	9
	4	6	11	1	3	8	5	10	0	2	9	7
	2	4	9	11	1	6	3	8	10	0	7	5
	7	9	2	4	6	11	8	1	3	5	0	10
RI↑	9	11	4	6	8	1	10	3	5	7	2	0

Figure 10. “Mongolian” Matrix

Additionally, I created rules governing the application of the pitches in my matrix. First, each group in a row can be considered as a motive. Second, every note or motive in the collection can be repeated or looped to create new materials and sounds. Through using those rules and the matrix I built, I composed the piece, *Singing on the Grassland*.

CHAPTER IV

DETAILED ANALYSIS OF THE EXPOSITION

Based on the previous illustration, I will show how the “Mongolian matrix” is used in the piece. As an example for the procedure used throughout the piece, I will analysis the first theme and second theme in the exposition to reveal the groups that are “hidden” in my rows, and demonstrate the regional musical elements that are embodied in my twelve-tone piece.

First, I will talk about the first theme in the explosion. The fundamental element in the first theme is the imitation of Long-song singing. There are two main characteristics of Long-song: long-phrase and diverse ornaments. Each long-phrase usually lasts for 15-30 seconds without any rests. In my piece, I mark the long-phrase with slurs and require the performers to change the bow smoothly. The ornaments are normally placed on a continuous note of each long-phrase. In my piece, the ornaments are neighbor tones and escape tones.

The first theme (mm.1-38) was based on the P0 row. It is in binary form, includes the A part and A' part. The first part (A) is from measure 1 to measure 14. In the part A, a four-note group of P0 row (D, E, A, B) is used to establish the D pentatonic scale.

In order to feature develop this tonal center, I followed the "repeat and loop" rule and recombine the notes of the scale to make four smaller note groups (two-note groups

and three-note groups). These smaller note groups constitute the basic melodic line of the A part.

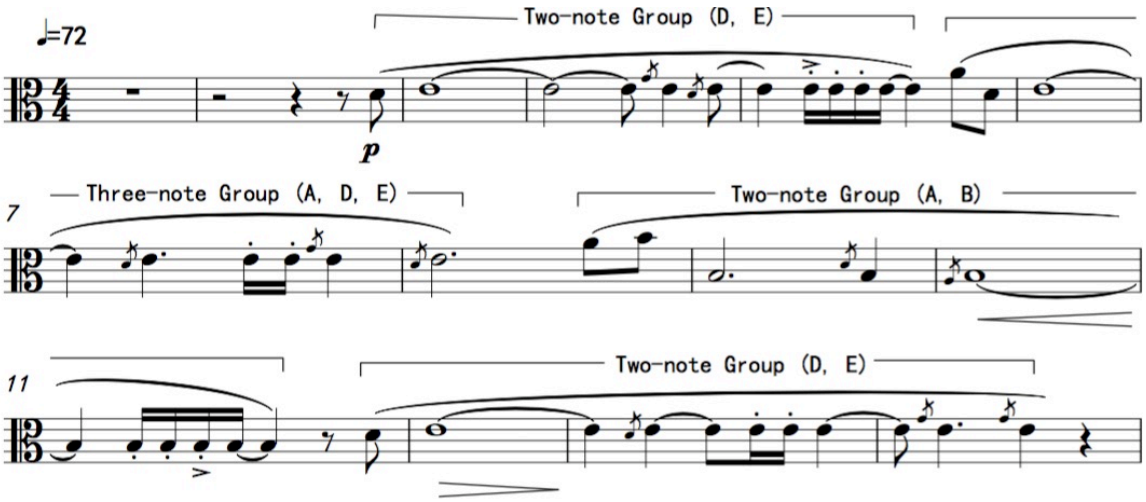

Figure 11. The Melody of First Part (A) in the First Theme

The texture in the A part also shares the same materials that from D pentatonic scale (D, E, A, B). One of the distinctive features is a fast-moving line accompaniment that expresses a scene of Long-song singing. Since Long-song is usually performed outdoors, the fast moving line is represent the blowing of the wind on the Mongolian grassland. In the process of creating this line, I followed the "repeat and loop" rule and recombine some two-note groups to form a new musical material. See Figure 12.

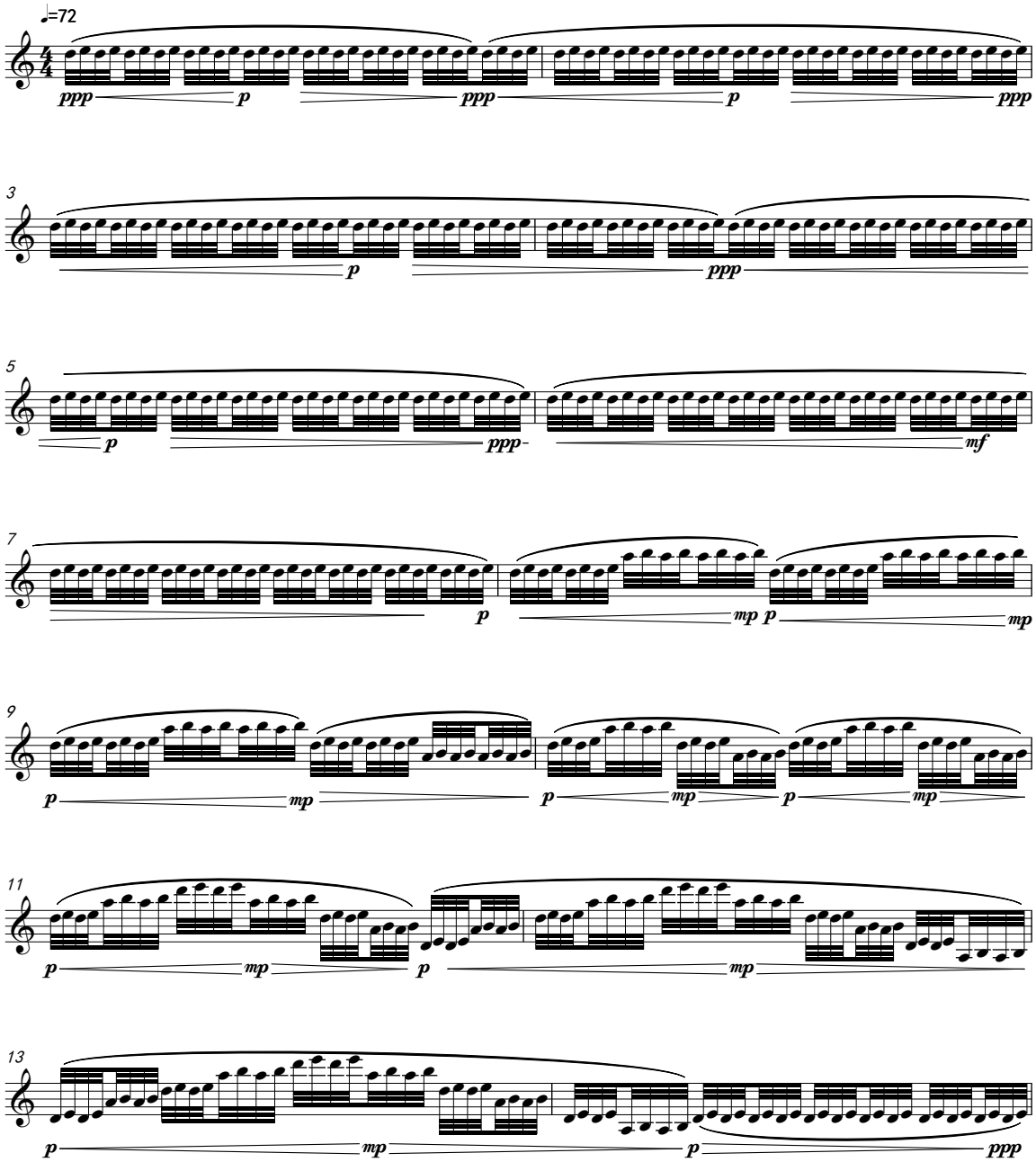

Figure 12. A Texture Element of First Part (A) in the First Theme

The second part (A') is from measure 15 to measure 31. I set up multiple tonal centers in this part. In measure 15-18, same four-note group (D, E, A, B) of P0 row is

applied to form the D pentatonic scale. In the next phrase (mm.19-23), I create a new five-note group (B, C#, D#, F#, G#). The five-note group is based on the B pentatonic scale. From measure 24 to measure 30, another five-note group (C#, F#, D#, G#, A#) is used to demonstrate the F# pentatonic scale. At the end of A' part, I also develop the C tonal center by using the last three notes of P0 row.

In order to develop multiple tonal centers, I keep following the "repeat and loop" rule and make several smaller note groups. These smaller note groups build the melodic line of A' part. In measure 31-32, two three-note groups (D#, G#, A#) and (C, G, F) are combined to form a six-note group and become a primary motive in the extension (mm. 32-38).

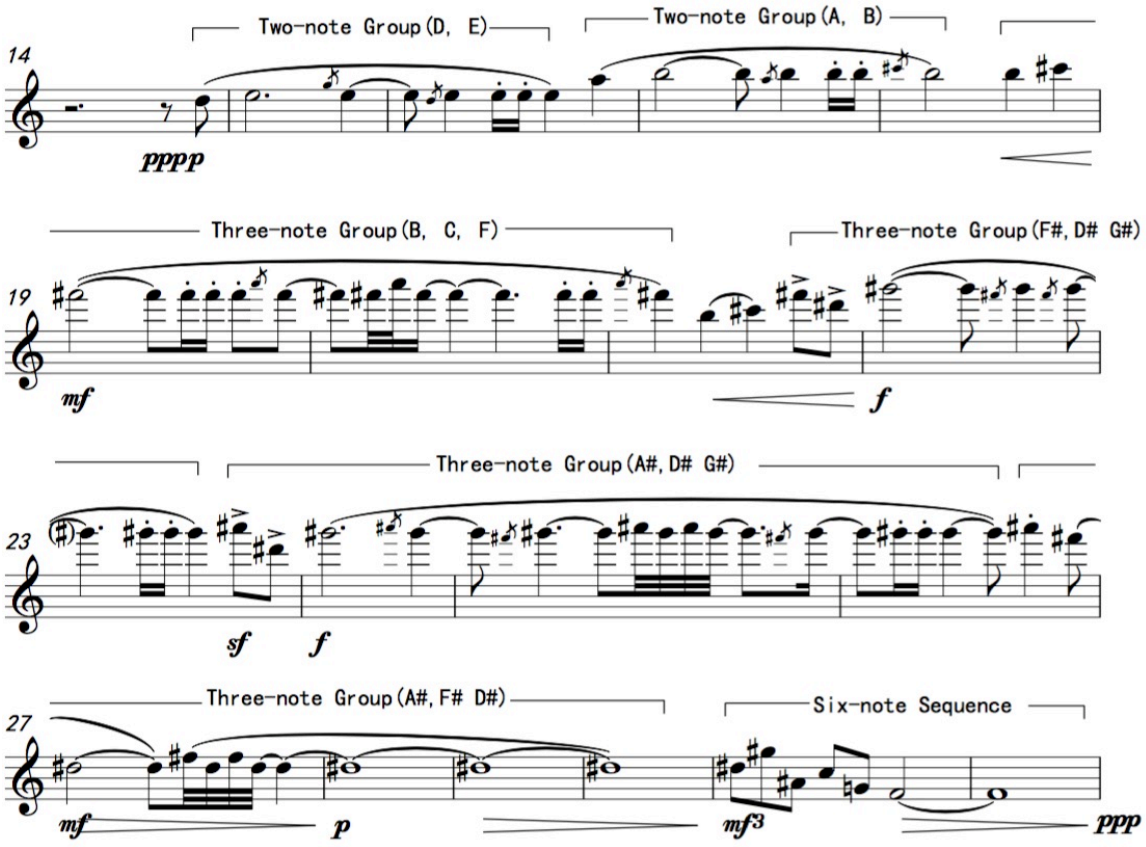

Figure 13. The Melody of Second Part (A') in the First Theme

The second theme is from measure 58 to 114. The fundamental element of the second theme comes from another Mongolian vocal genre—Höömii. I applied Höömii singing technique in my melody. The technique allows one singer to sing two melodies at the same time by using overtone skill. Each melody could be distinguished by different rhythmic patterns and registers. One is a bass line that remains in the lower register, and the other features a whistling sound that stays in the higher register. To imitate the characteristics of both lines, the flute plays in the higher register (whistling sound), and the cello plays in the lower register (bass line). The flutist is asked to use a special

technique—singing while playing throughout the second theme. This technique will produce a whistling sound that best suits the higher register. At the same time, the cellist plays long-notes in the lower register, changing the bow smoothly.

The second theme is a ternary form，which I identify as B part, C part and B' part. The introduction starts from measure 58 to measure 69, and developing on the RI7 row (A, G, D, E, F#, B, G#, C#, D#, F, A#, C)..

The introduction includes two-measure motives. From measure 58-59, the motive is illustrated by a seven-note group (F#, B, G#, C#, D#, F, A#) of RI7 row. From measure 60-61, I extend the seven-note group (F#, B, G#, C#, D#, F, A#) to eight-note group (F#, B, G#, C#, D#, F, A#, C). From measure 62-65, the eight-note group (F#, B, G#, C#, D#, F, A#, C) is further extended to become a ten-note group (F#, B, G#, C#, D#, F, A#, C, A, G). From measure 66-69, I use a two-note group (D, E) of the RI7 row to link the next phrase.

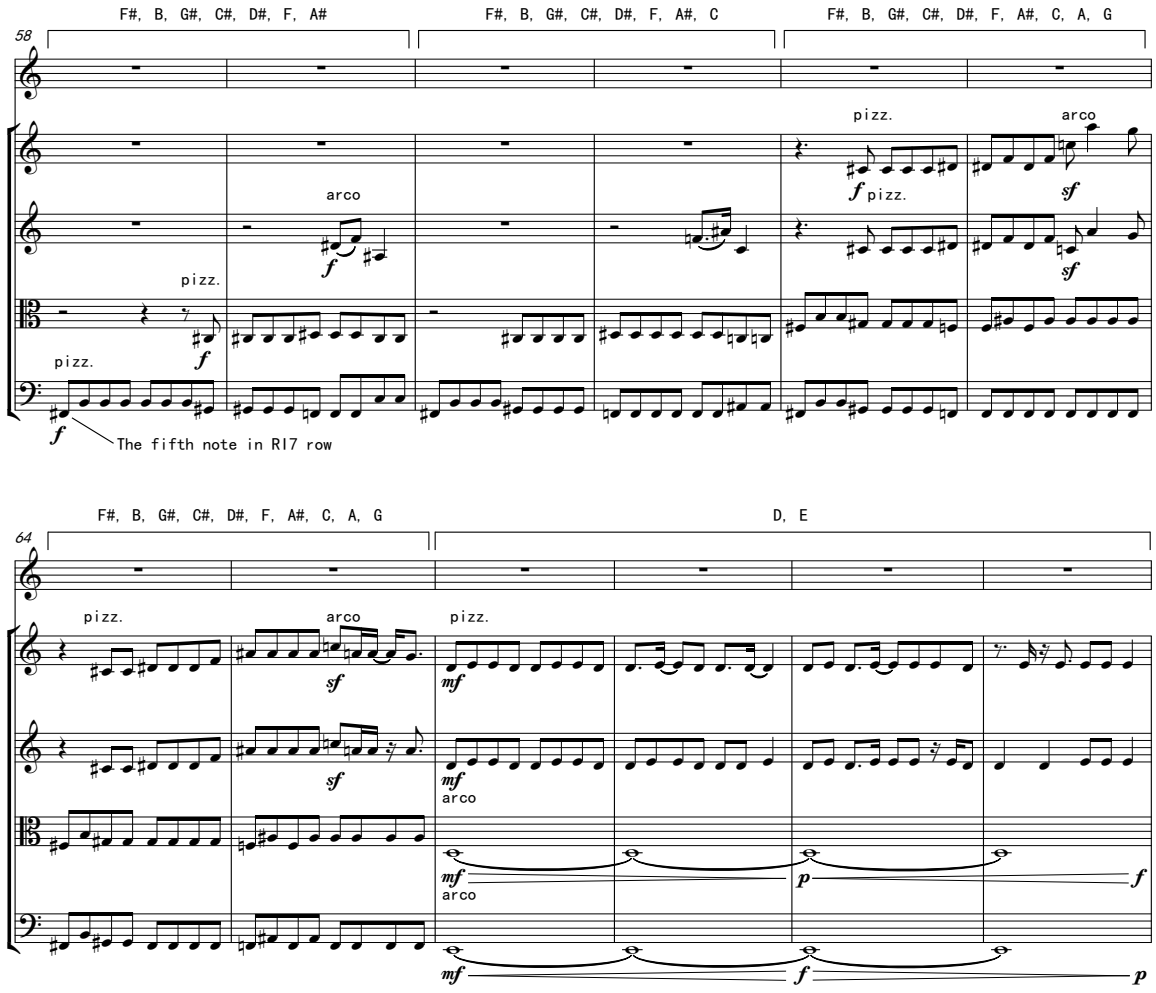

Figure 14. The Introduction in the Second Theme

The Part B proper begins in measure70 and ends in measure 84. There are two phrases in the part B. The first phrase (mm.70-76) is based on the RI7 row. To compose a new melodic line, I use a five-note group (F#, B, G#, C#, D#) of RI7 row to establish the B pentatonic scale. The texture, on the other side, is fully based on the previous introduction materials, and draws from the seven-note group (F#, B, G#, C#, D#, F, A#) of RI7 row.

The second phrase of the second theme (mm.77- 84) is build upon the RI10 row and shares similarities with the first phrase. In the aspect of melody, I use a five-note group (F, G, A, B, E, F#) of the RI7 row. In the aspect of texture, I use a RI10 row without the first note C (A#, F, G, A, D, B, E, F#, G#, C#, D#).

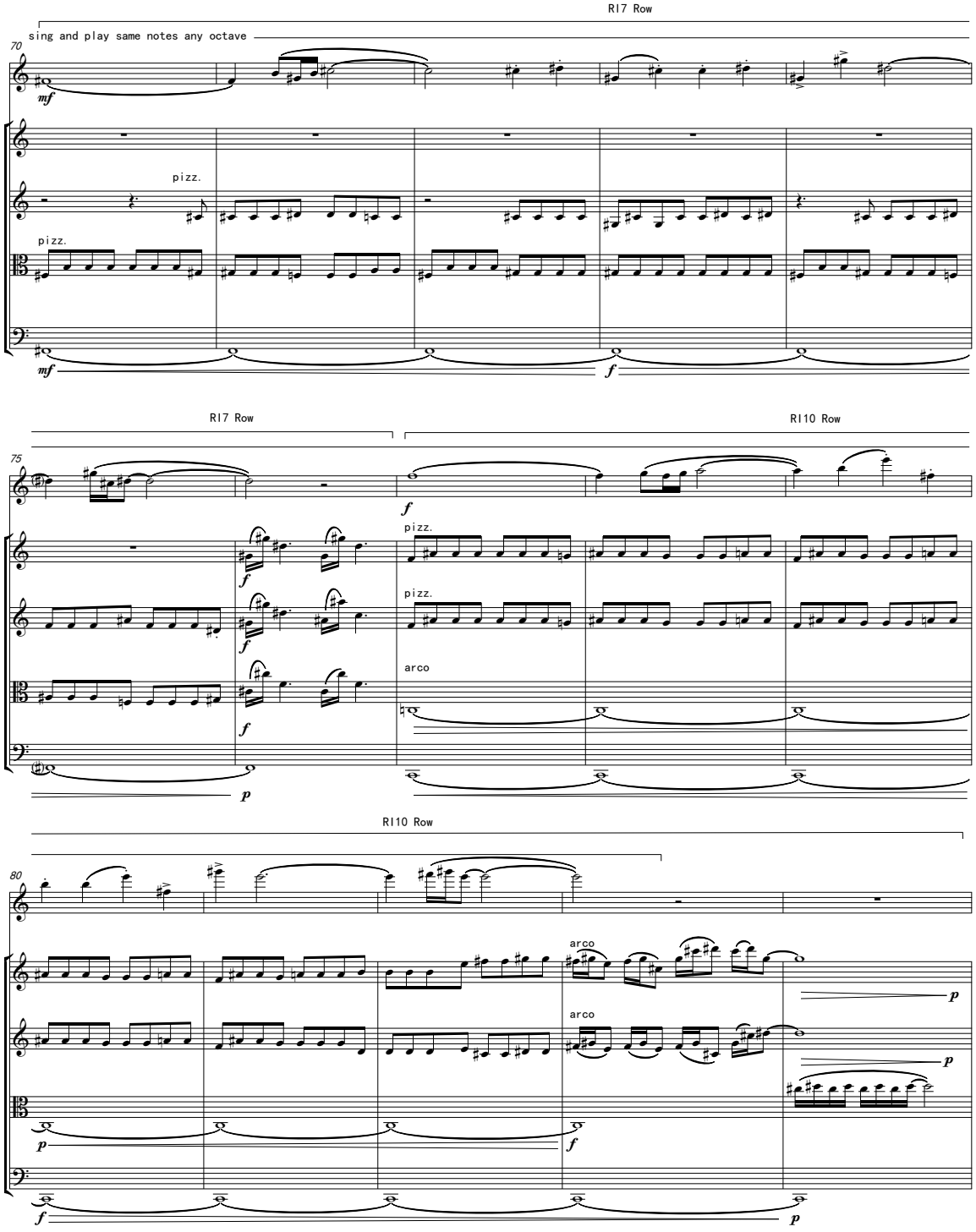

Figure 15. The Part B in the Second Theme

The second section of Theme 2 (part C) is from measure 85 to measure 100. It is developed with short motives. From measure 85 to 89, a five-measure motive is drawn on the RI7 Row. From measure 90 to 95, the five-measure motive is extended to a six-measure motive. At the meantime, the material is arranged on the RI10 row, rather than the RI7 row. From measure 96 to 100, another five-measure motive is presented. This motive is back to RI7 row, which is the motive of the introduction.

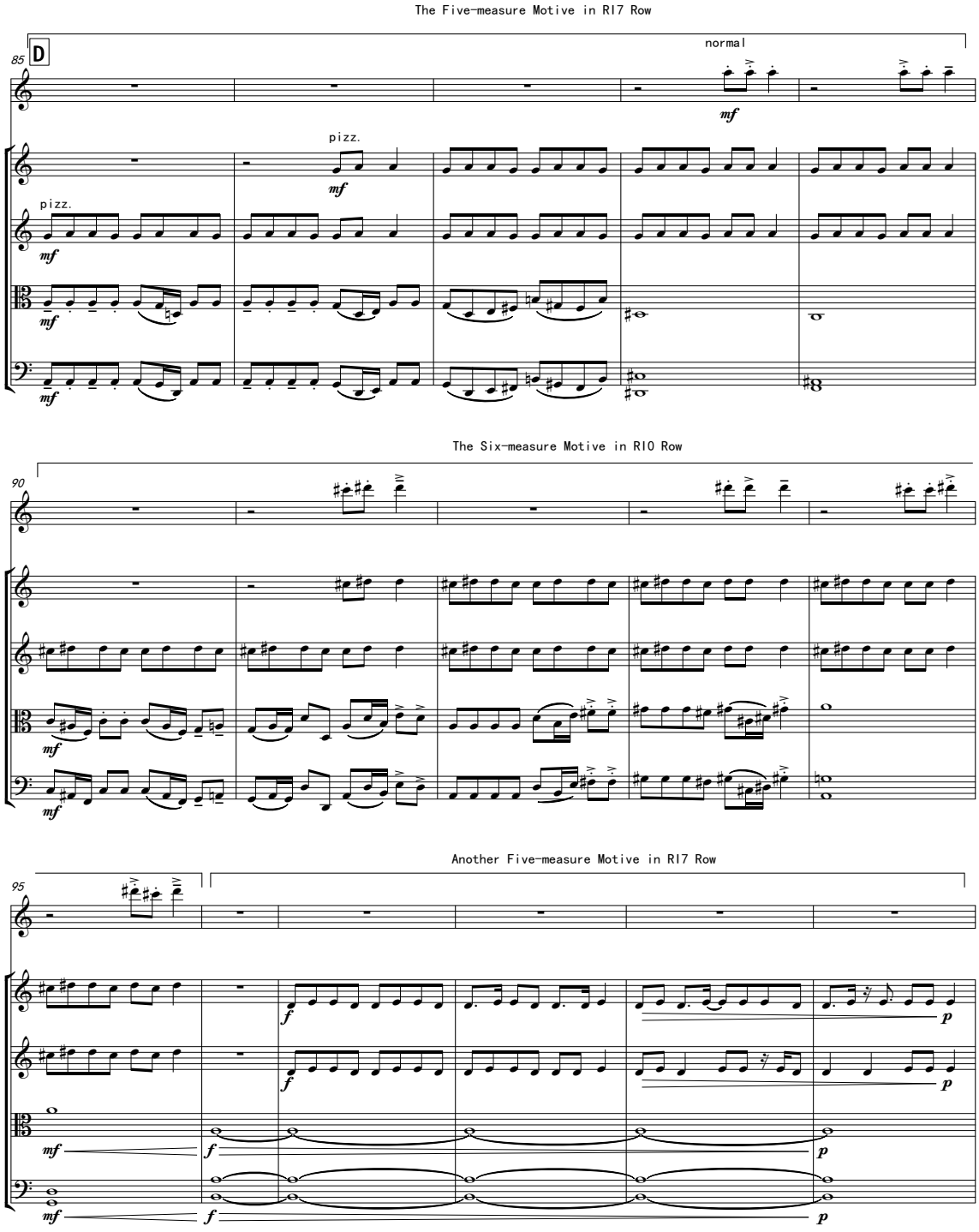

Figure 16. The Part C in the Second Theme

B' starts from measure 101 to 114. It is a recapitulation part. It repeats the materials of the first B part.

CHAPTER V

CONCLUSION

Composing *Singing on the Grassland* has encouraged me to focus on my studies of Mongolian vocal music and serial ideologies. One of my major tasks was to analyze and summarize the distinctive characteristics of two Mongolian vocal styles —long-song and Höömii. Additionally, I focused on the application of the twelve-tone technique to my writing. By combining these two musical styles, the audience might experience a new sound that retains the traditional Mongolian melodies but presents them in a dissonant texture. Now I look forward to continuing my work in the field of reinforcing the collaboration of folk music and modern techniques.

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APPENDIX A

SCORE OF *SINGING ON THE GRASSLAND*

Singing on the Grassland

Score

2016

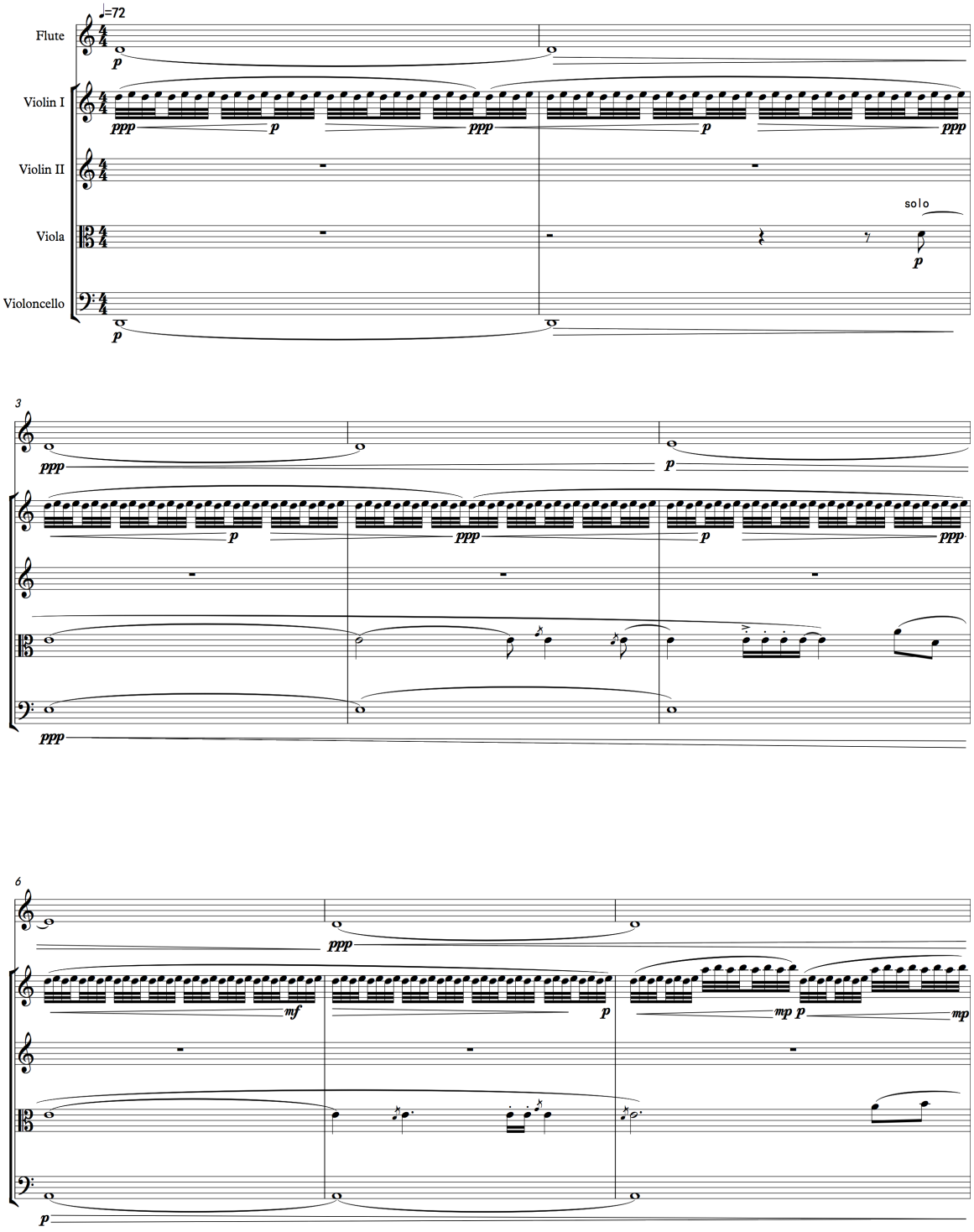
Binshan Zhao

Program Notes

Singing on the Grassland, is written for flute and string quartet. My main innovation is flexibly applying two different Mogolian vocal styles—long song and Höömii in each movement. As a contemporary composer, I find the possibilities in combining the characteristics of Mongolian vocal music with twelve-tone technique. In order to keep and mix two identical musical styles, I create a matrix and applying it in the whole piece. This innovative project shows my constantly explorations on harmonizing Mongolian music with western atonal music during the master's study. I will continue working on this idea as well as try to develop a lifelong engagement in collaborating Mongolian musical culture with western traditions.

Singing on the Grassland

Binshan Zhao



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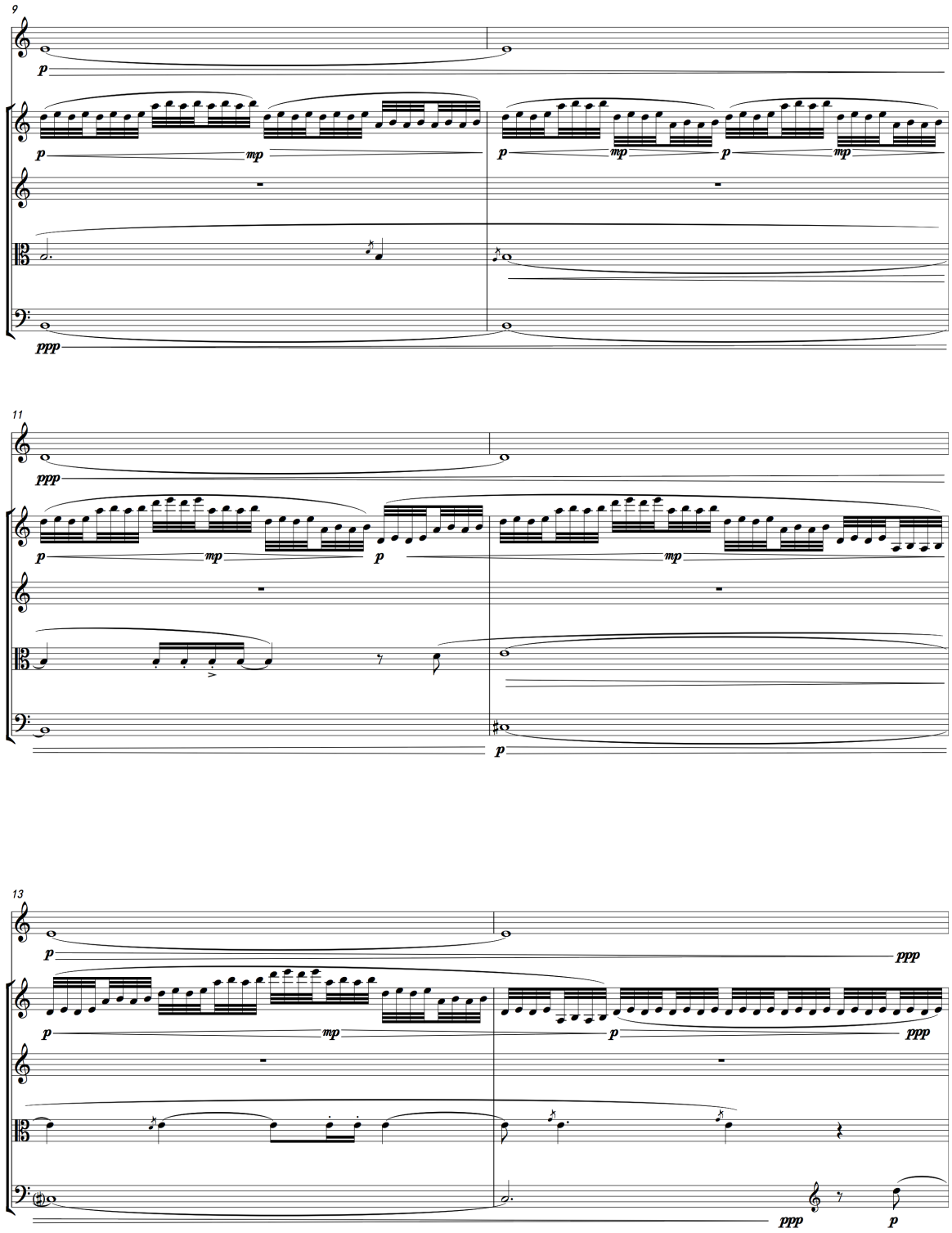
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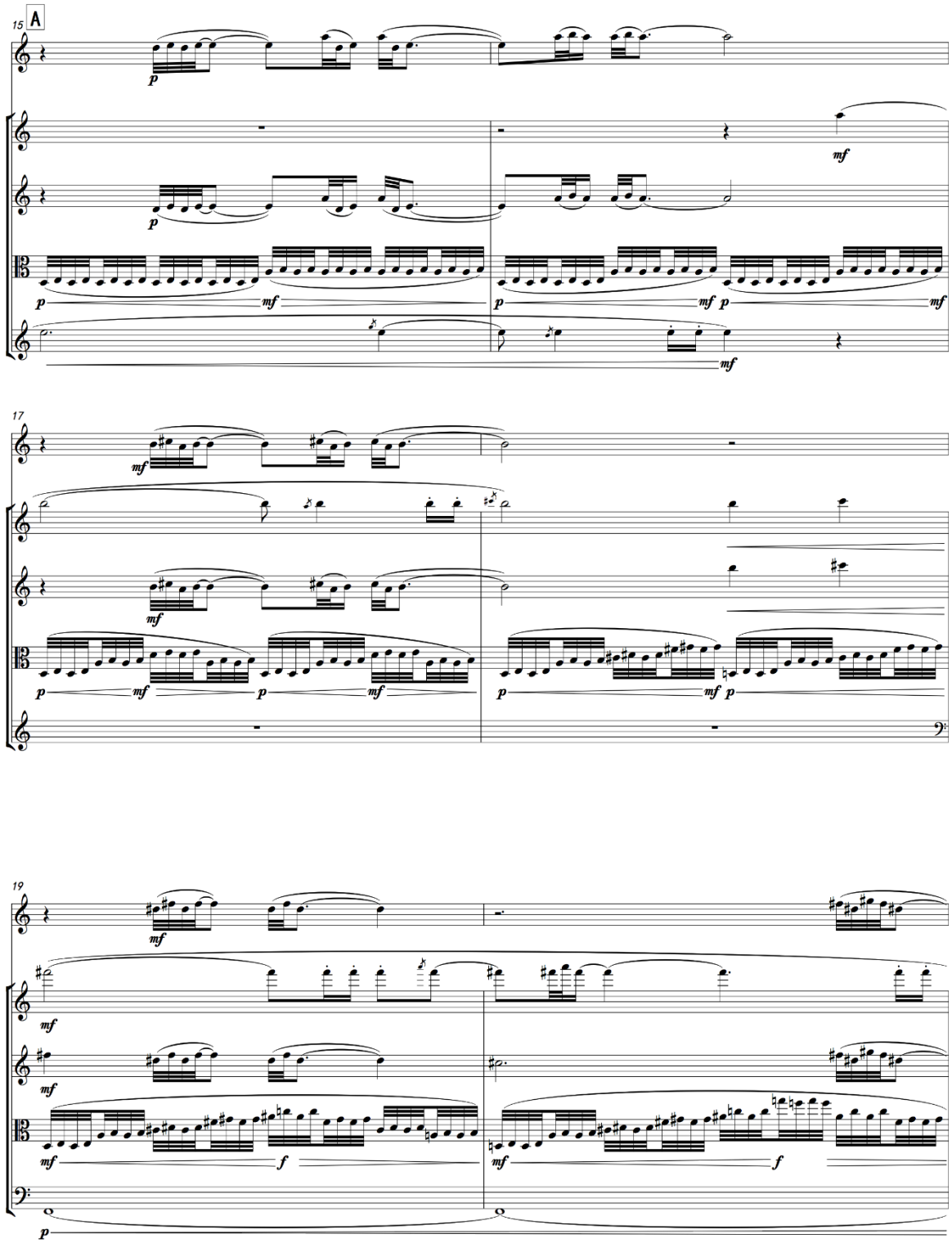
13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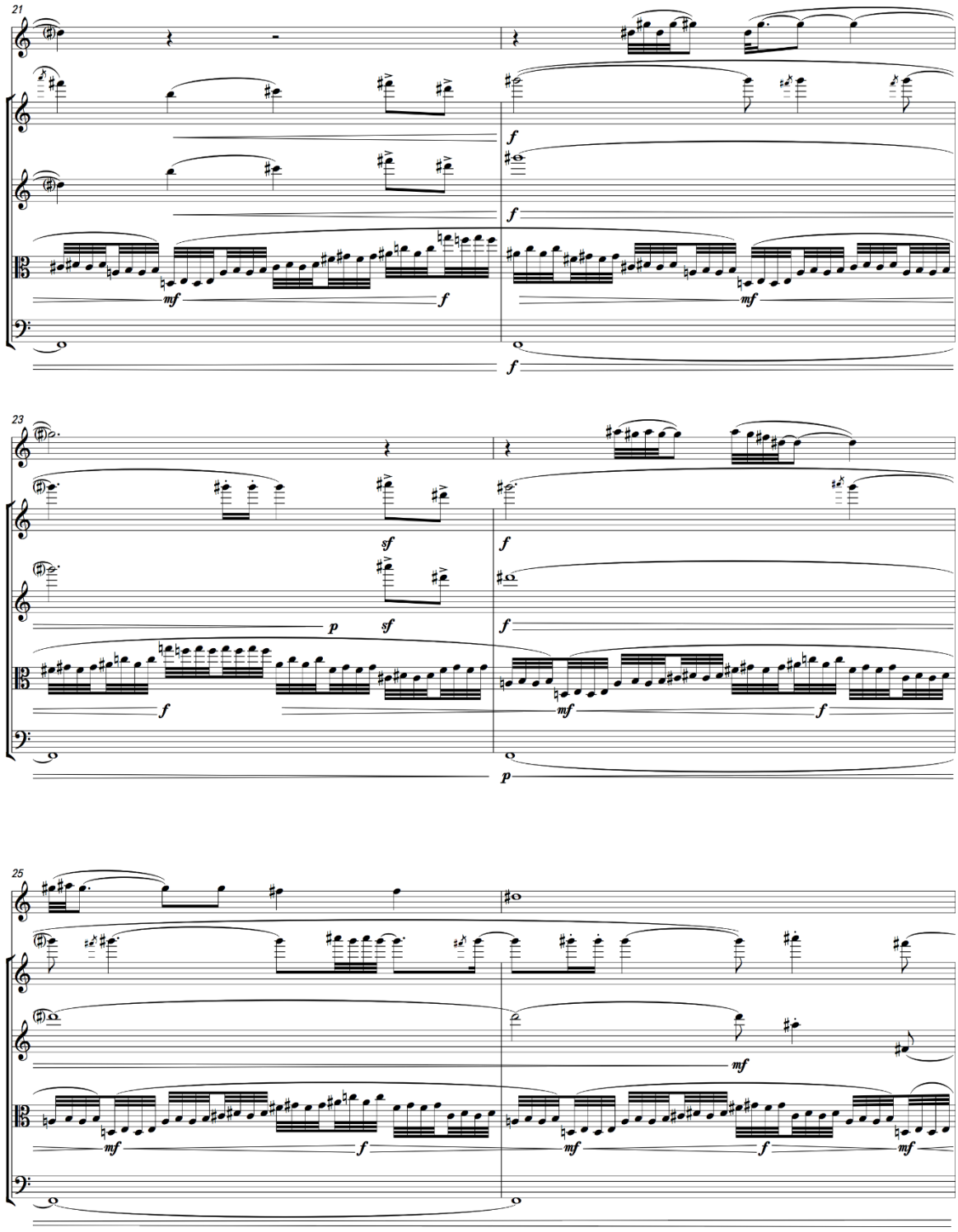
A
17
19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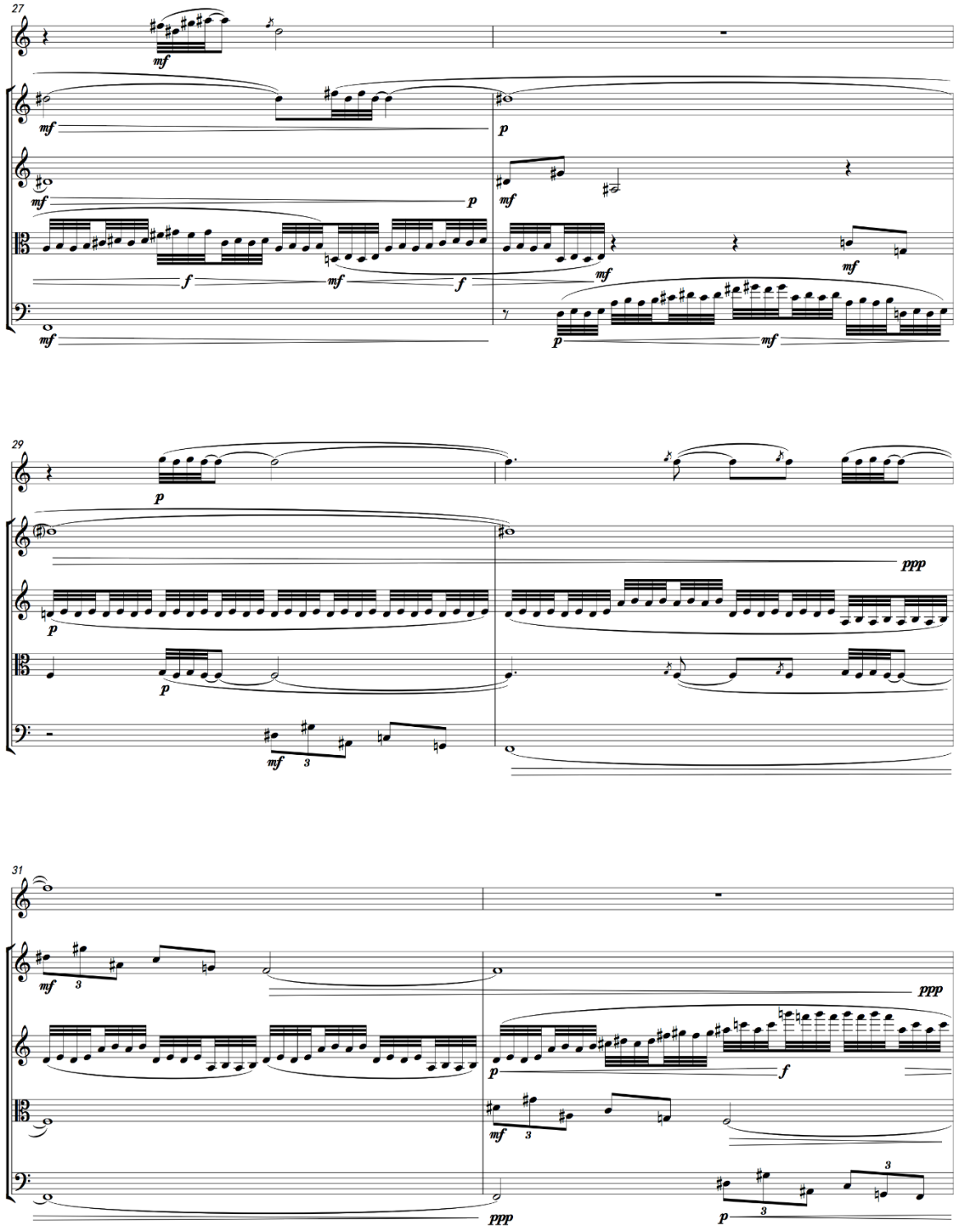
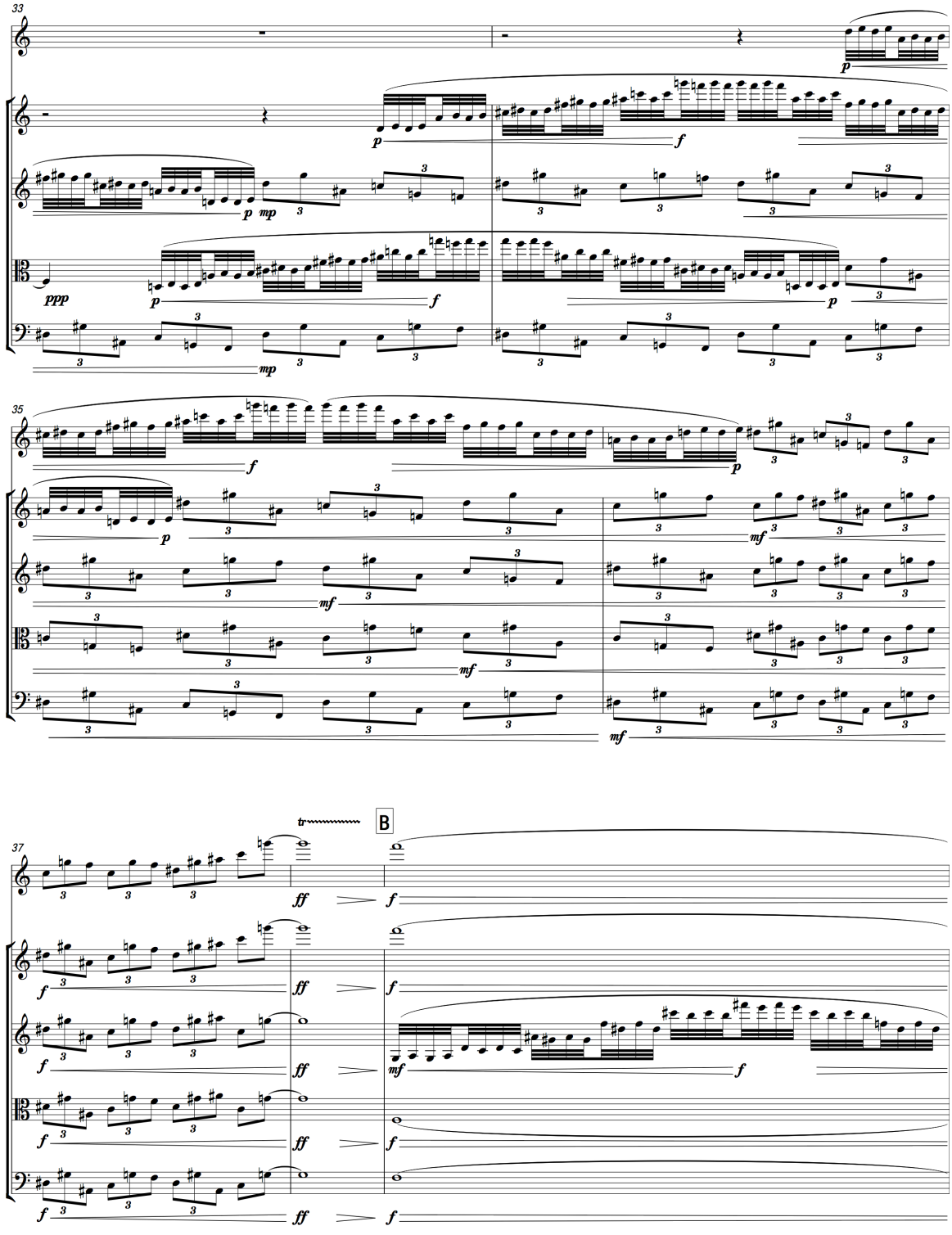
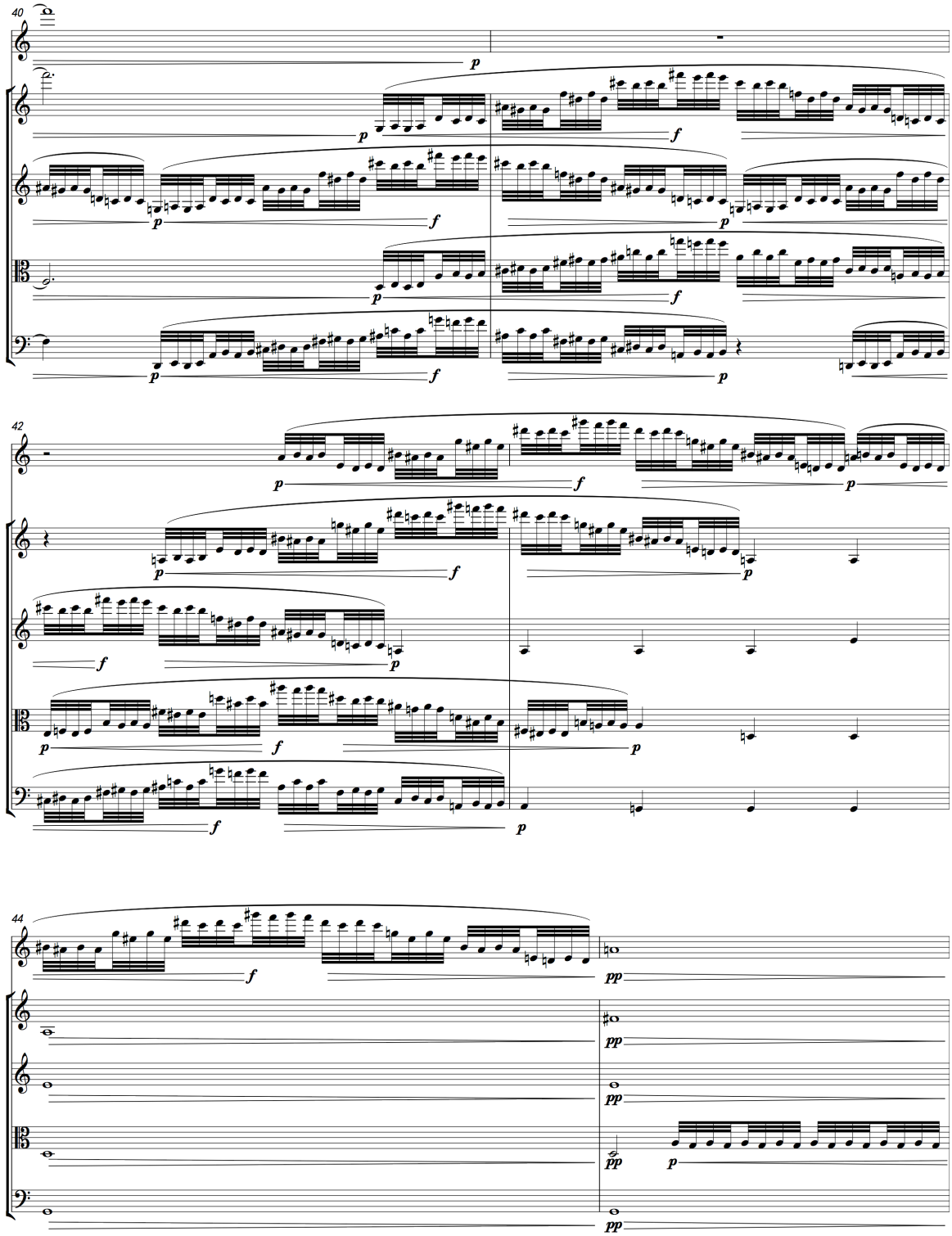

27
mf
mf
p
mf
p
mf
f
mf
f
mf
mf
mf
p
mf
29
p
p
p
ppp
mf
3
31
mf
3
ppp
p
f
mf
3
ppp
p
3
3


33
35
37
B
tr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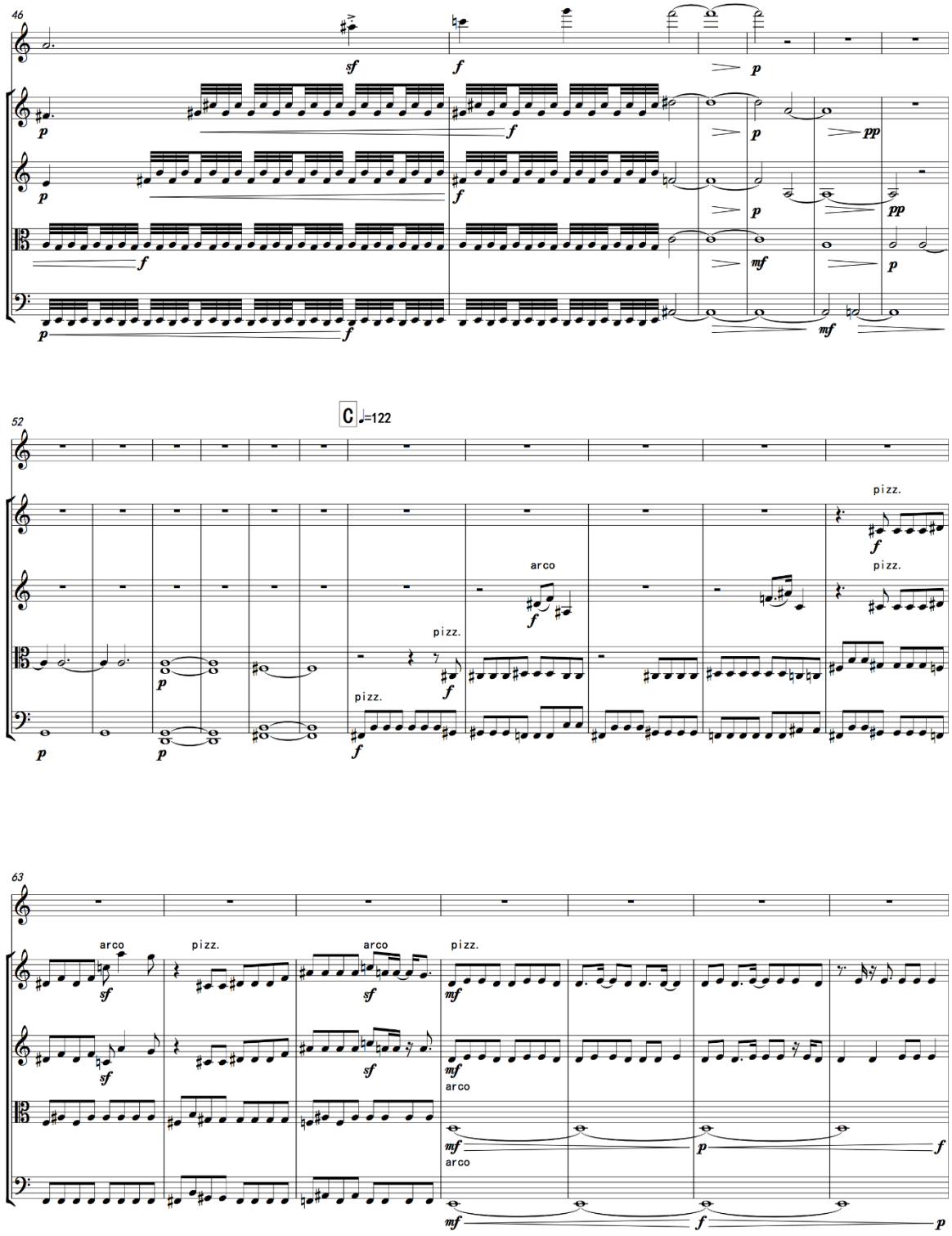
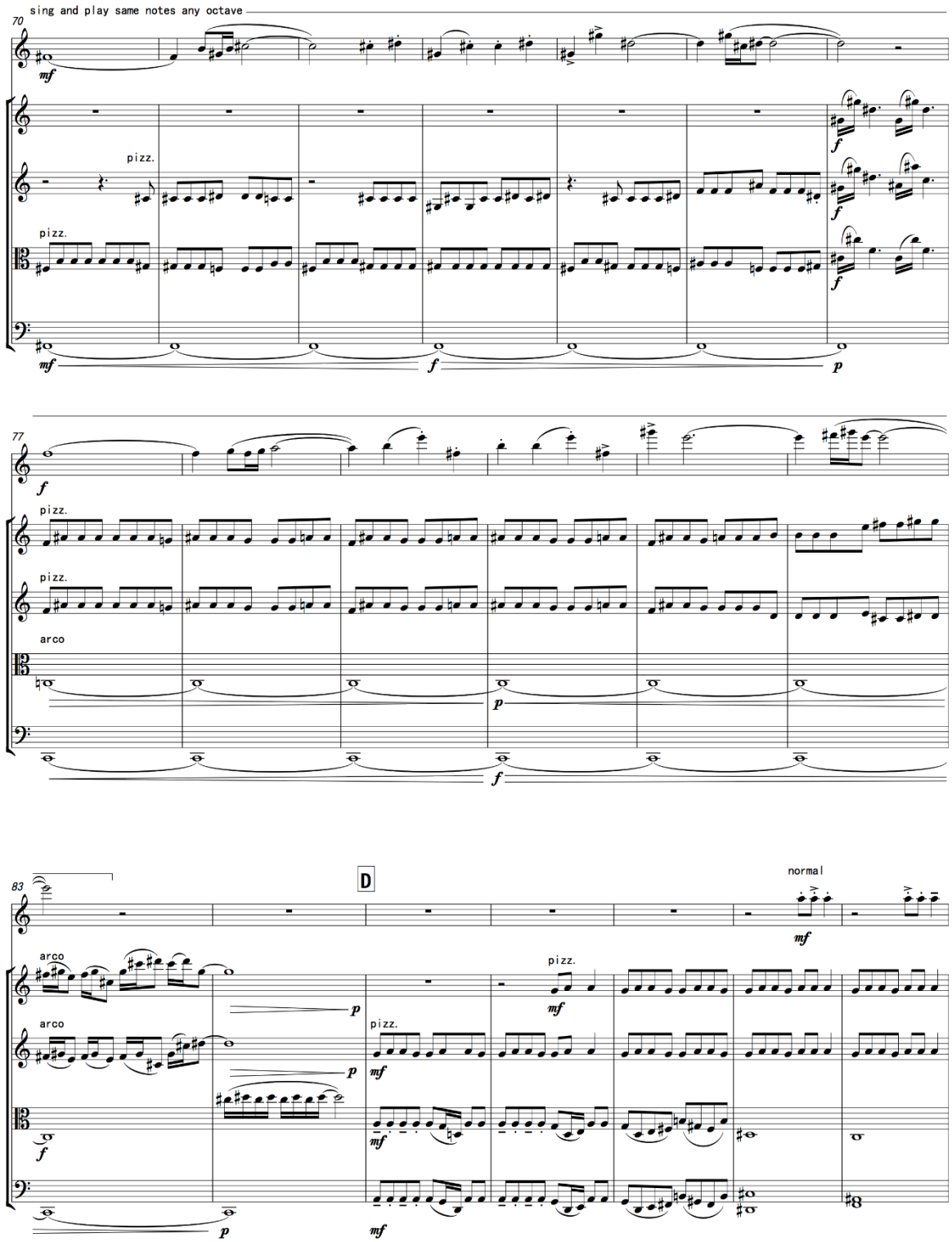
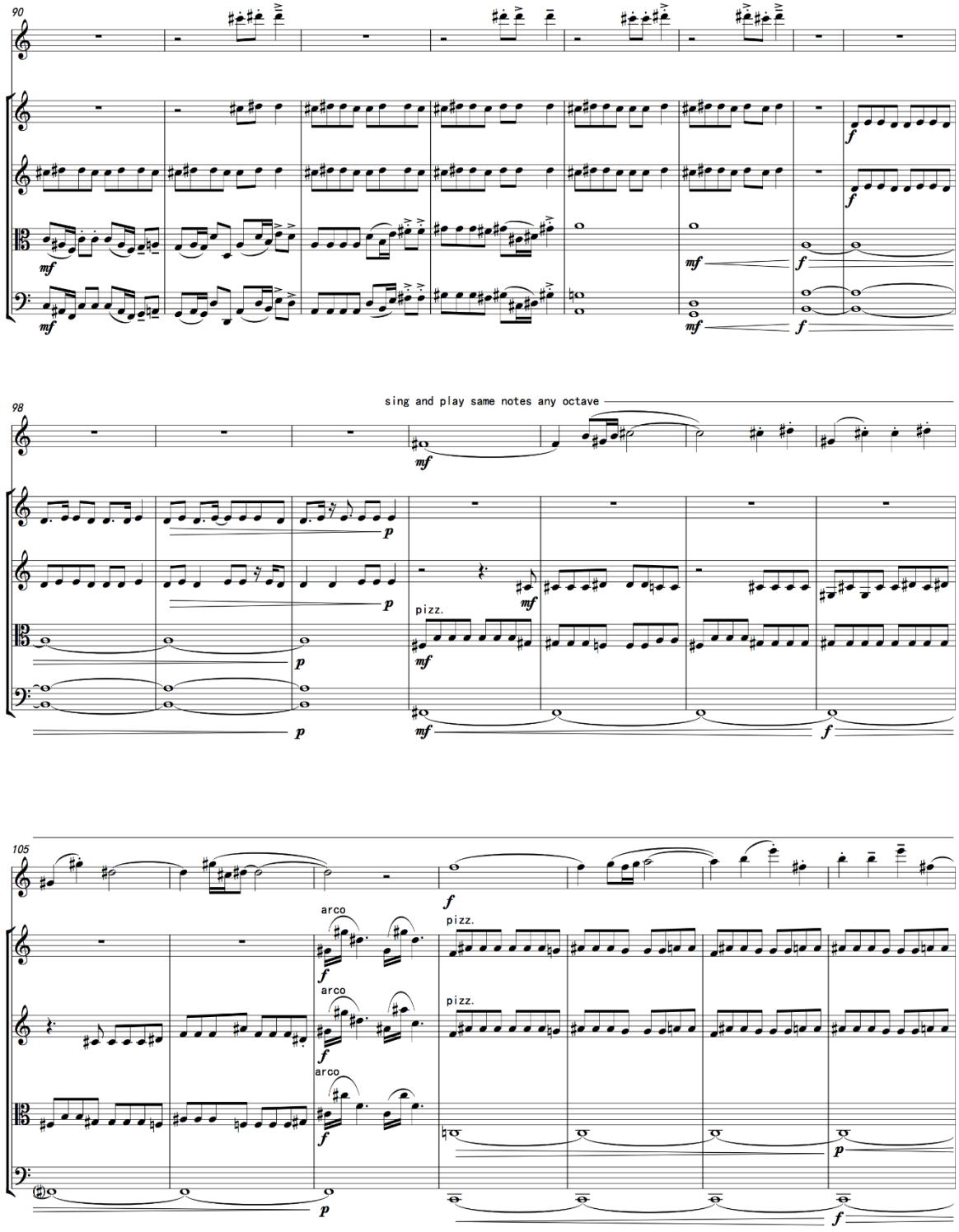
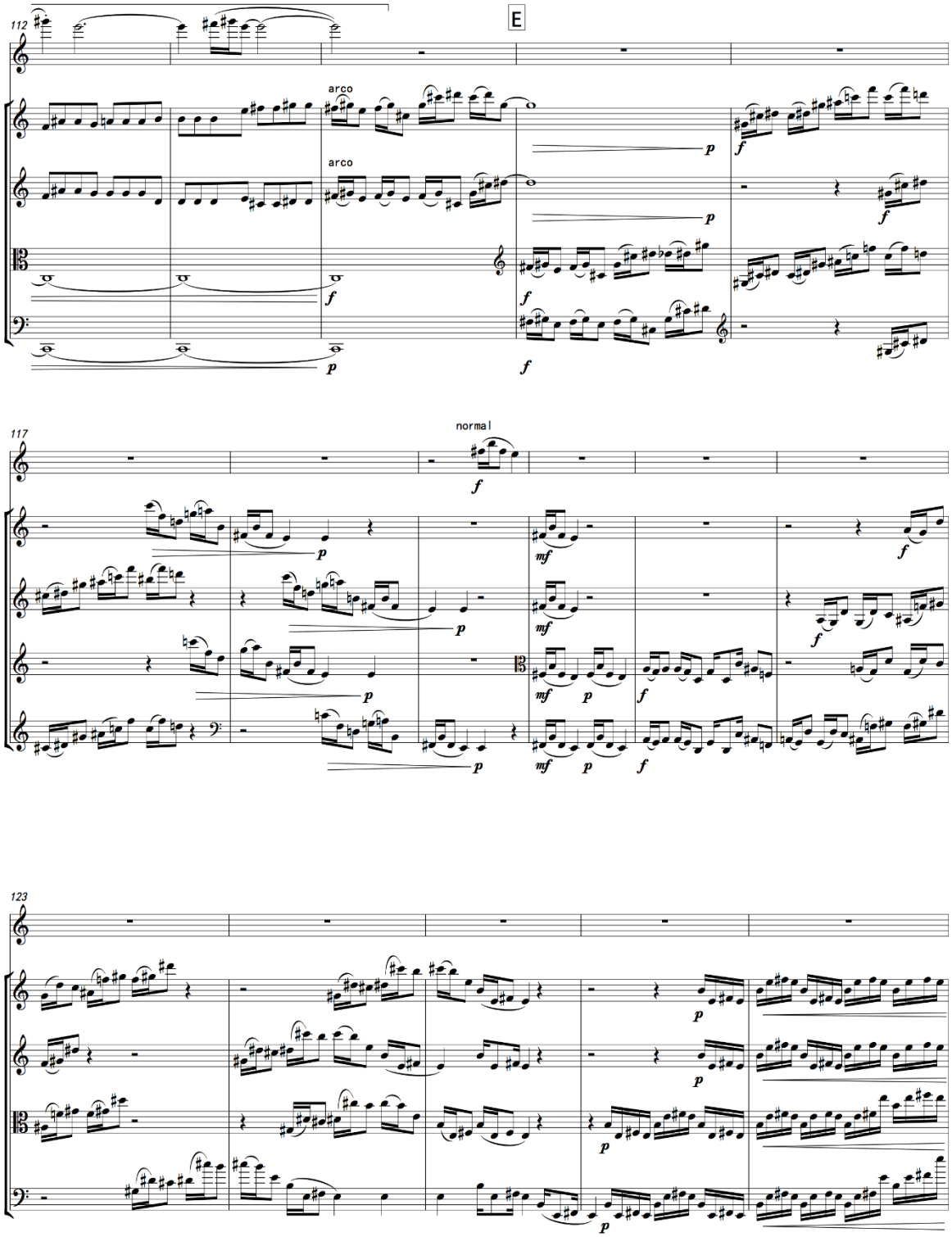
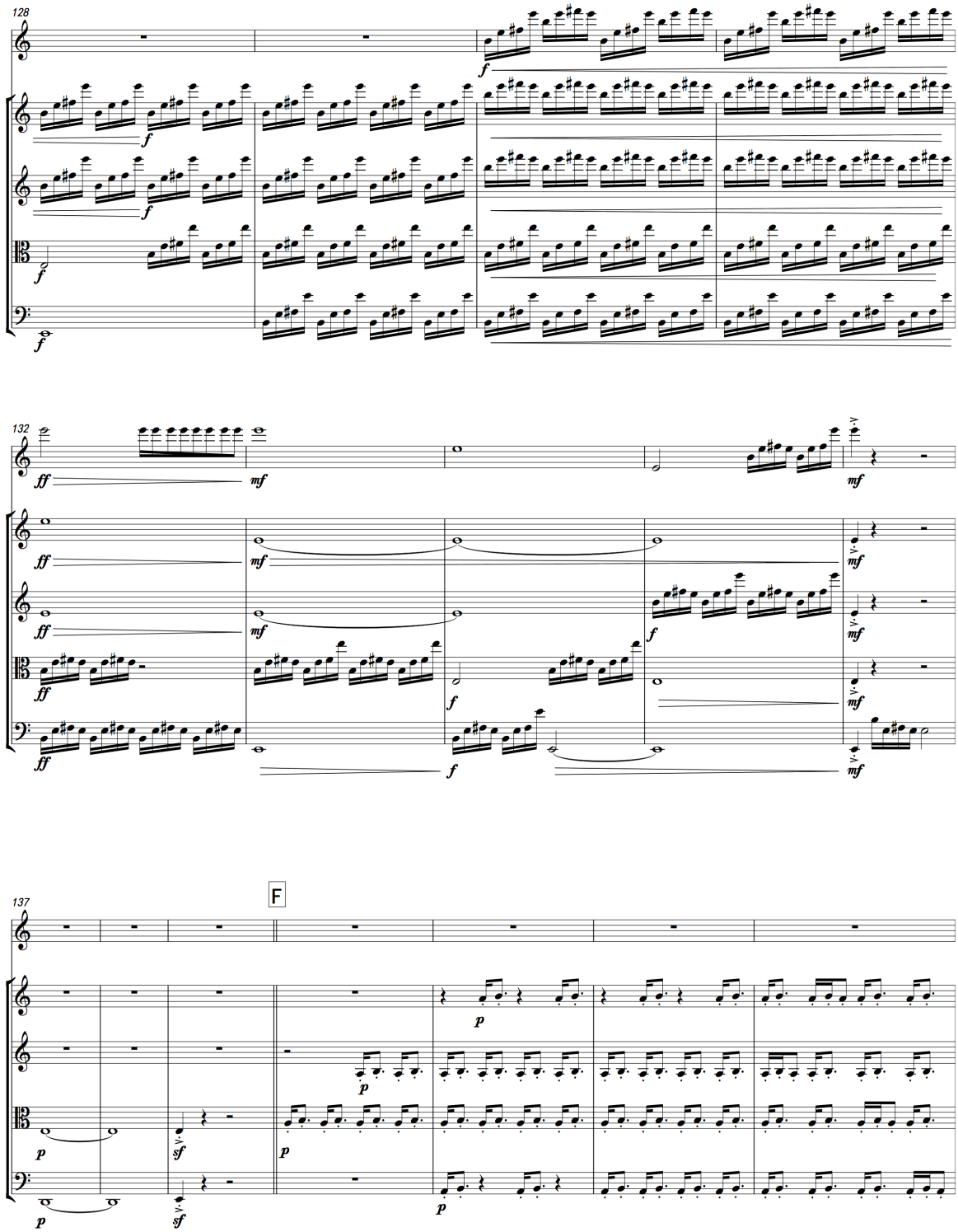
42
44

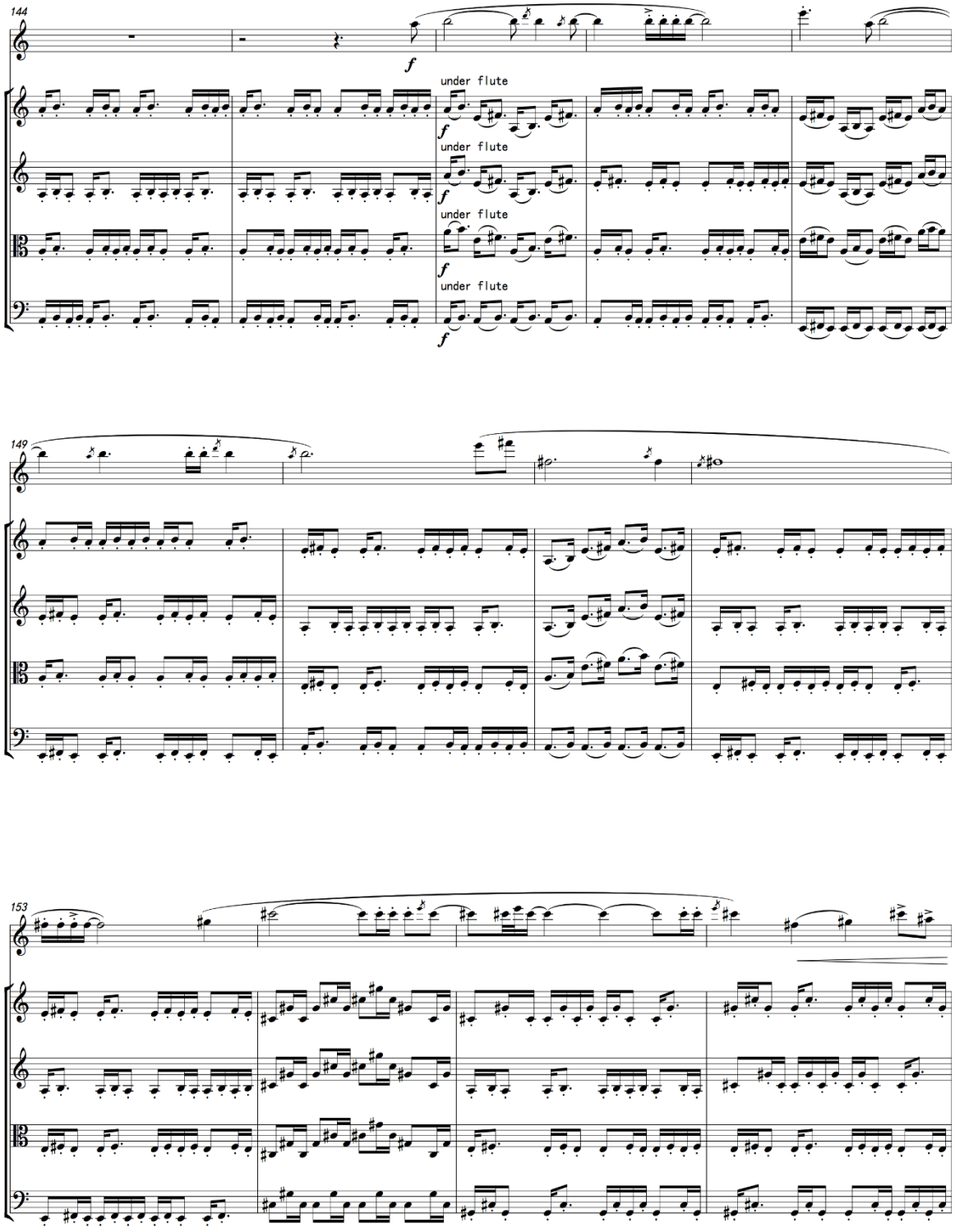

46
52
C ♩=122
63
arco
pizz.

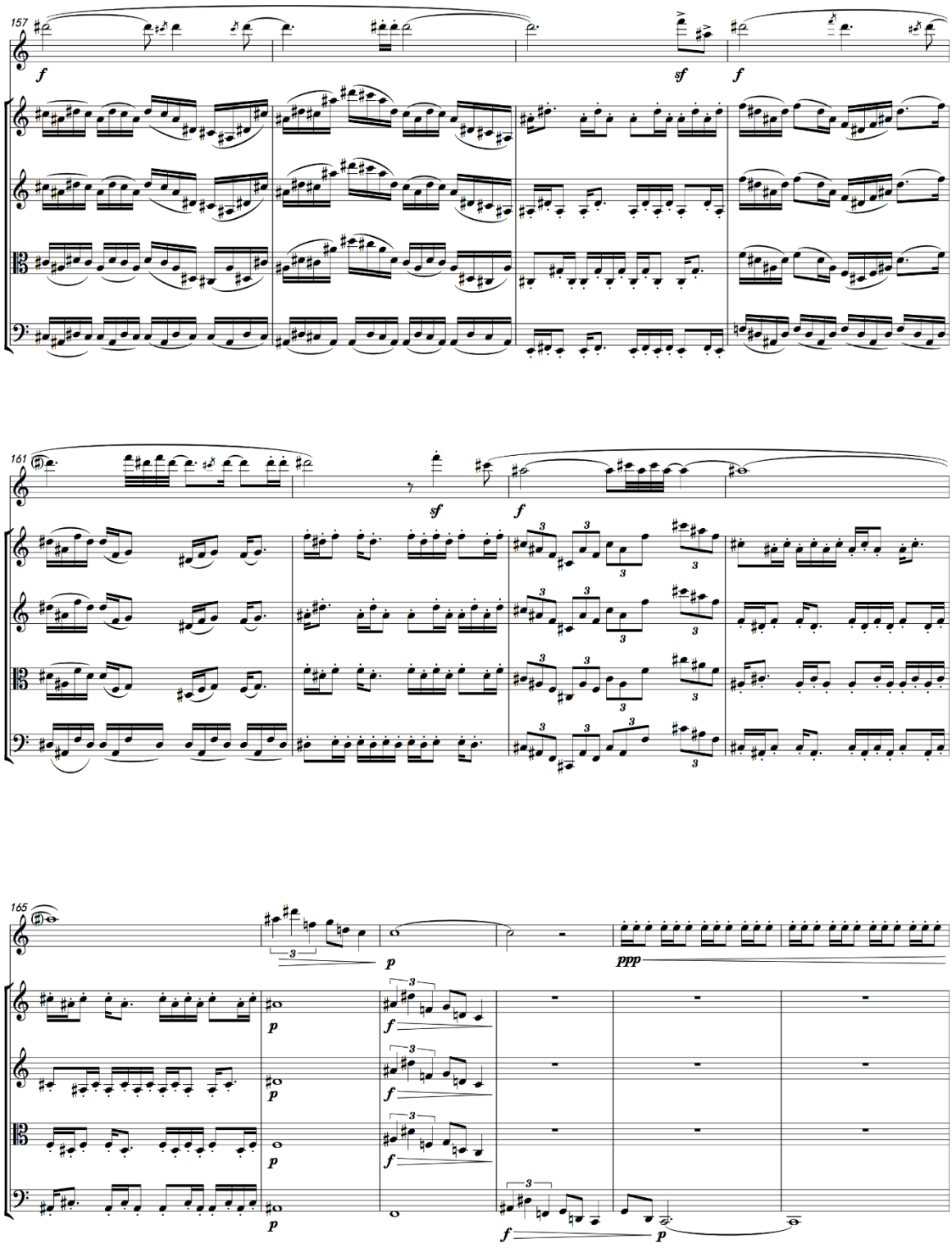

sing and play same notes any octave
70
mf
pizz.
pizz.
f
f
mf
f
p
77
f
pizz.
pizz.
arco
p
f
83
D
normal
mf
arco
arco
p
p
f
p
pizz.
mf
pizz.
mf
mf
mf

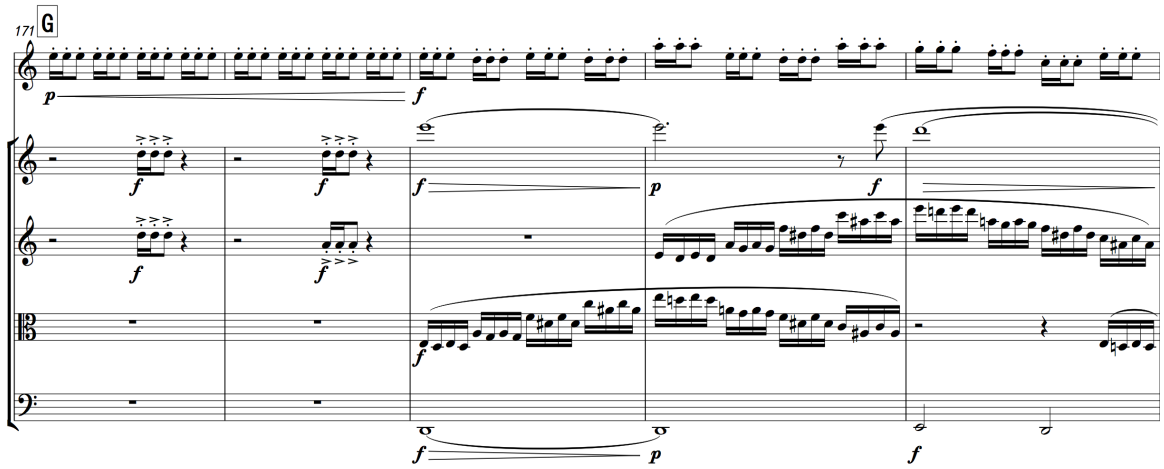

90
98
sing and play same notes any octave
pizz.
105
arco
pizz.

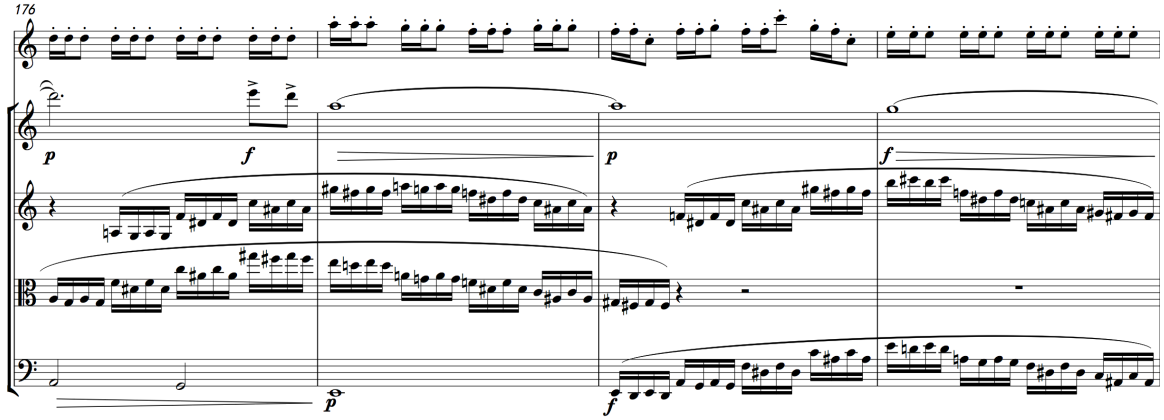

112
E
arco
arco
117
normal
123


128
132
137
F


144
f
under flute
f
under flute
f
under flute
f
under flute
f
149
153


157
f
sf
f
161
sf
f
165
p
ppp
p
f
p
f
p
f
p
f
p


171
G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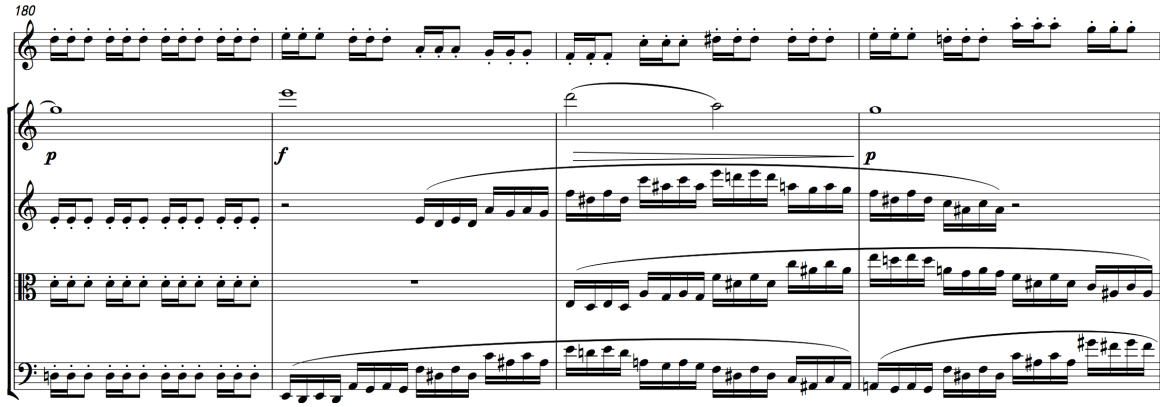
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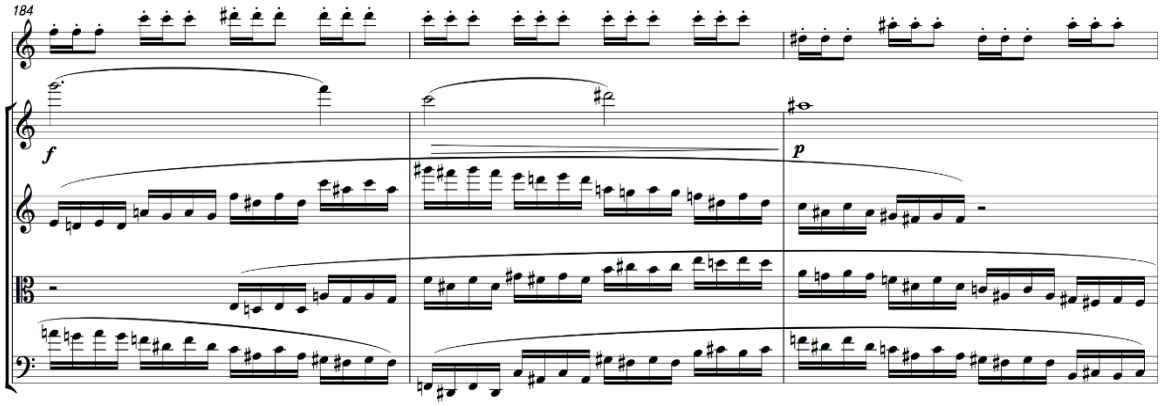
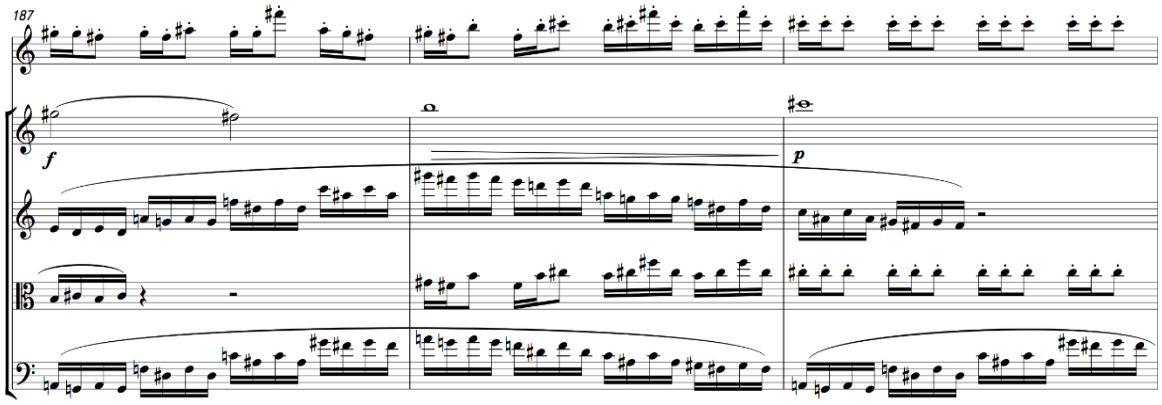
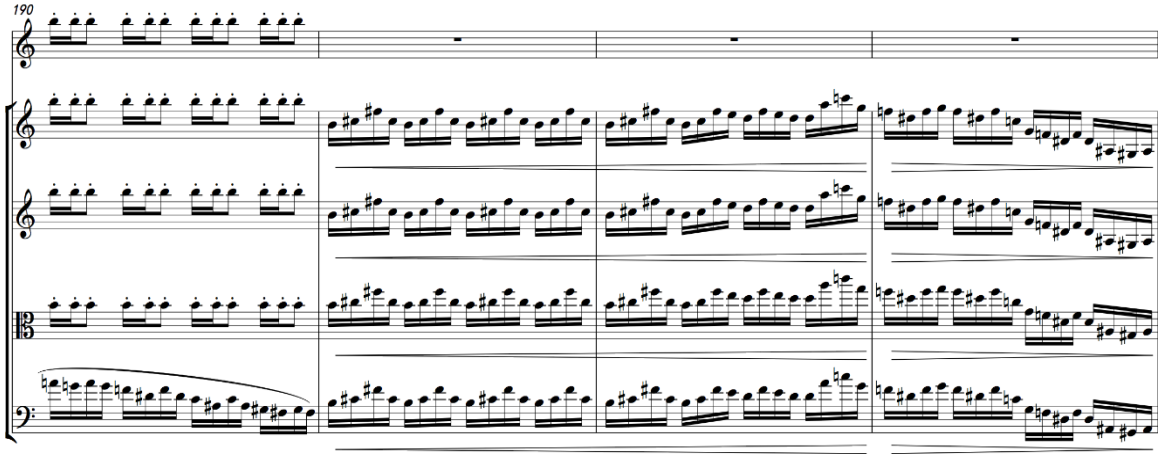

184
f
p


187
f
p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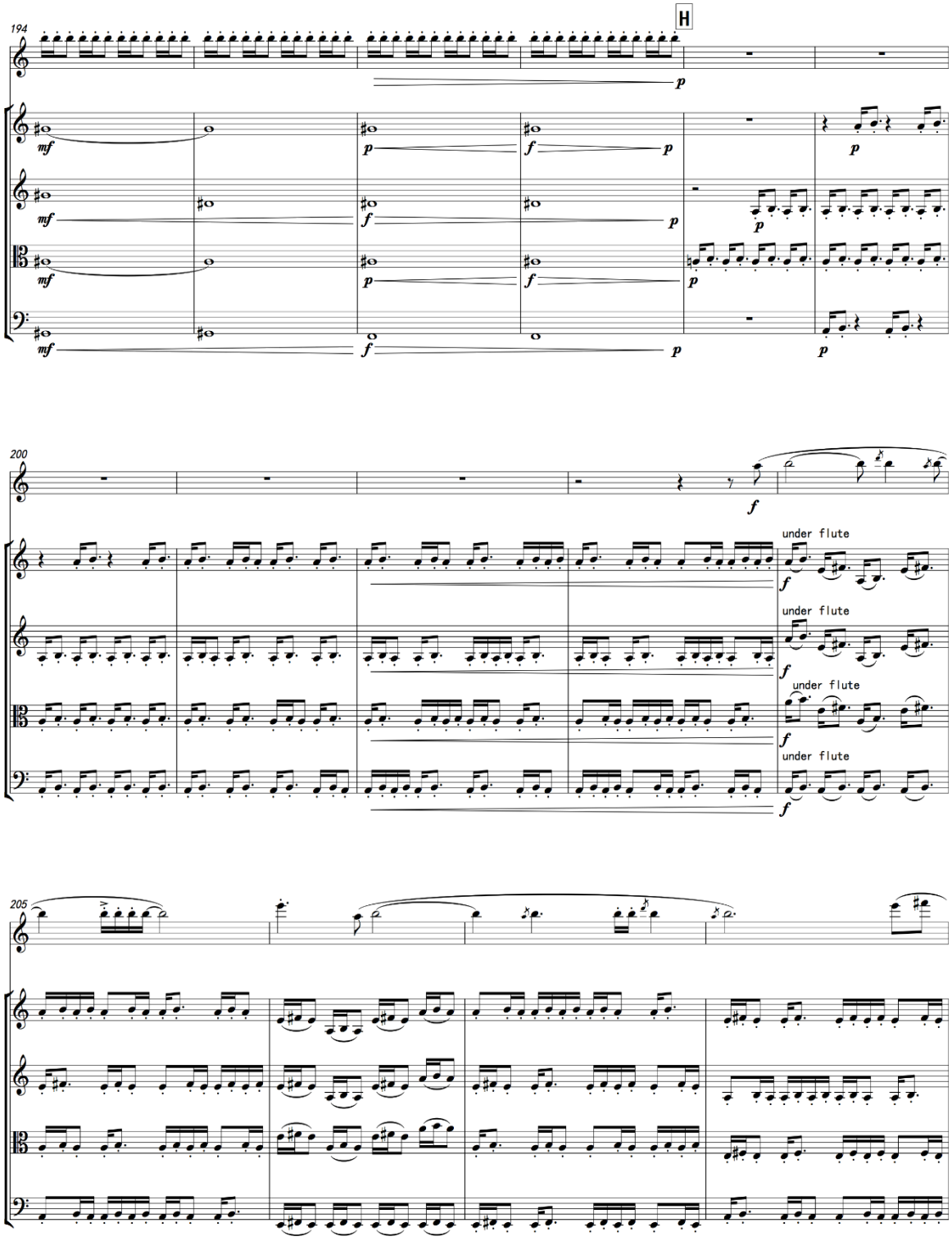
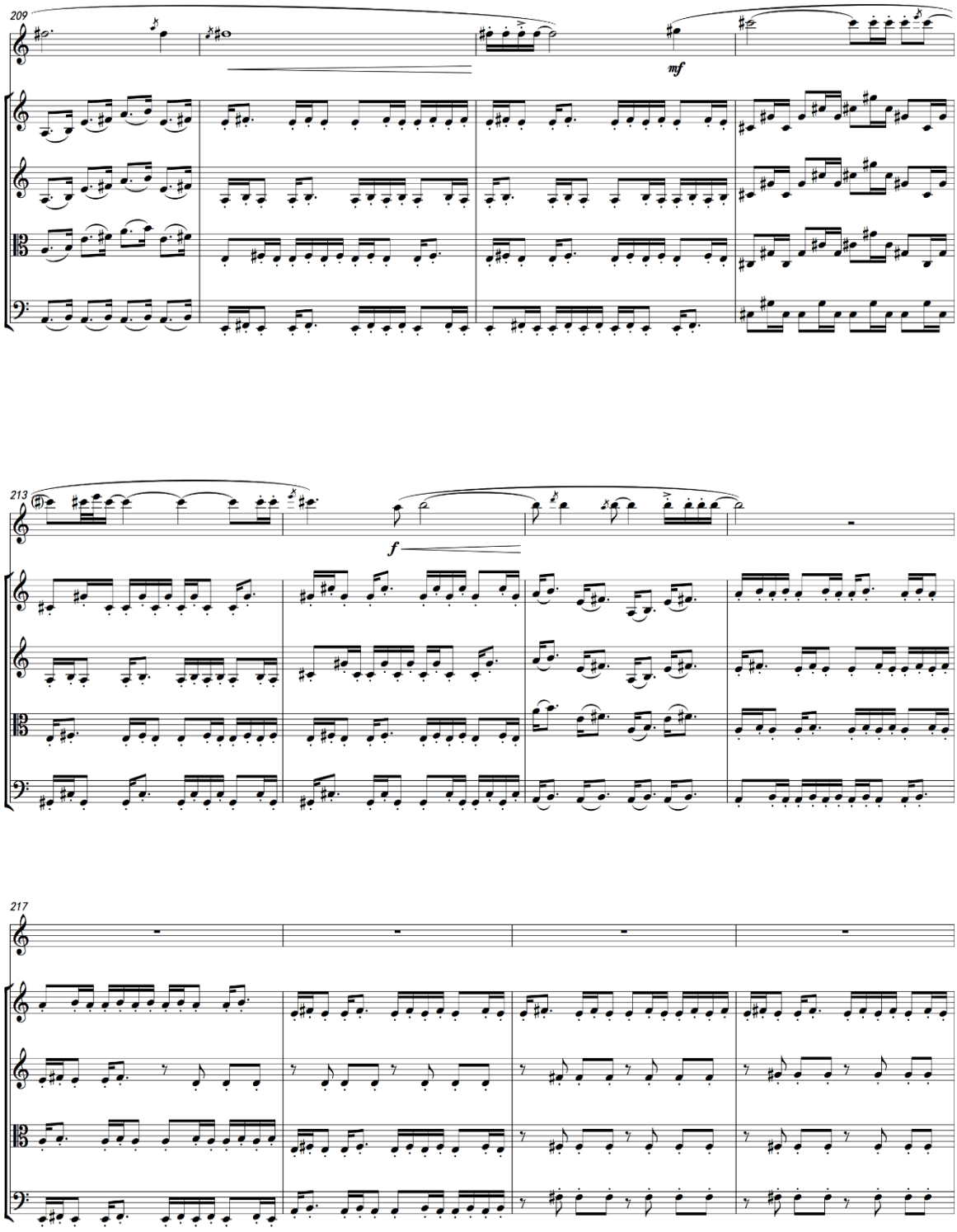
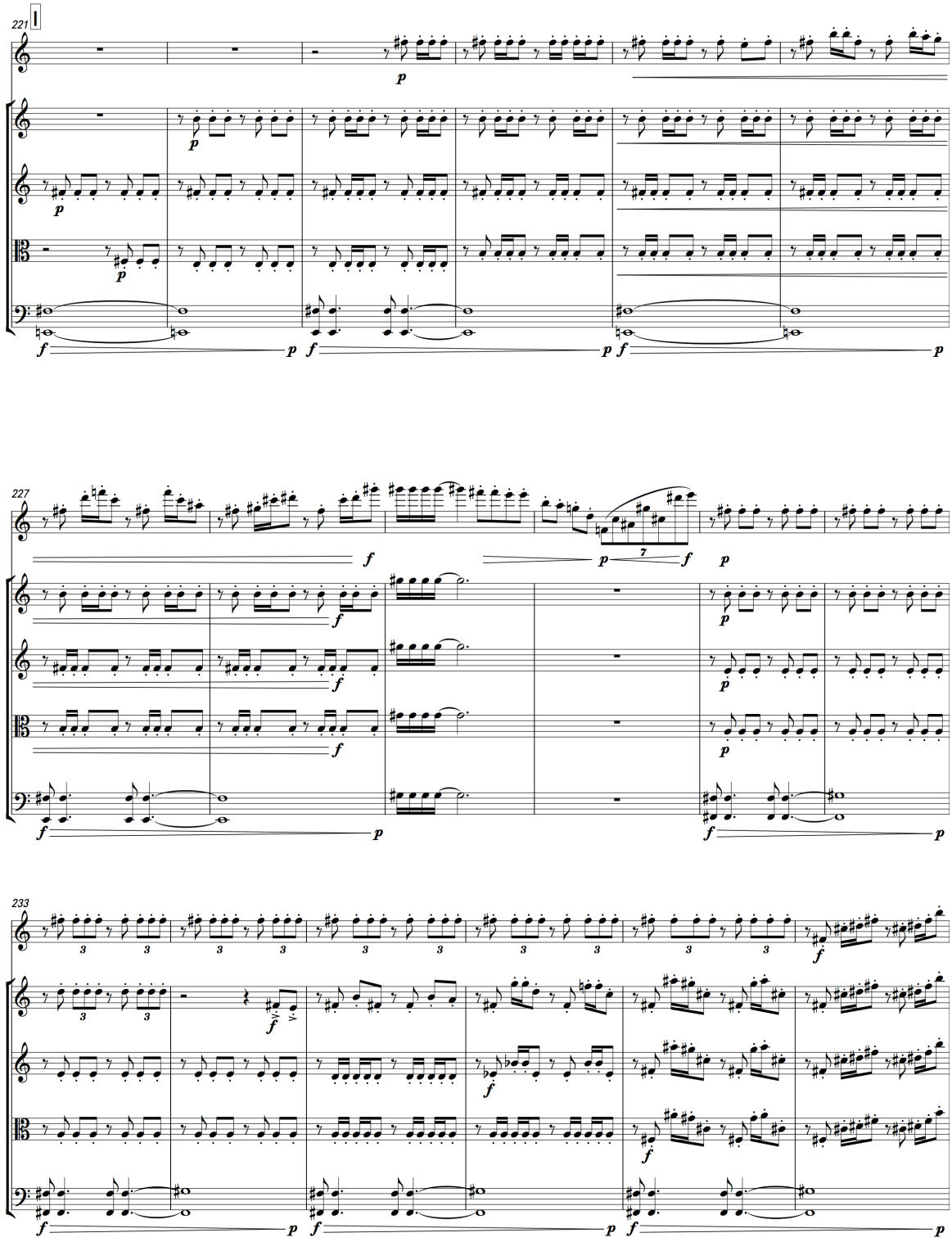
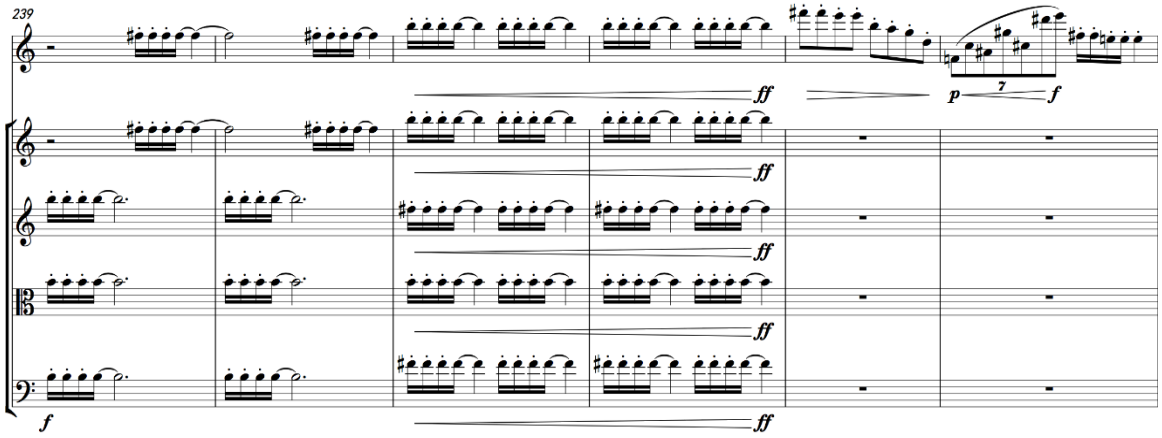
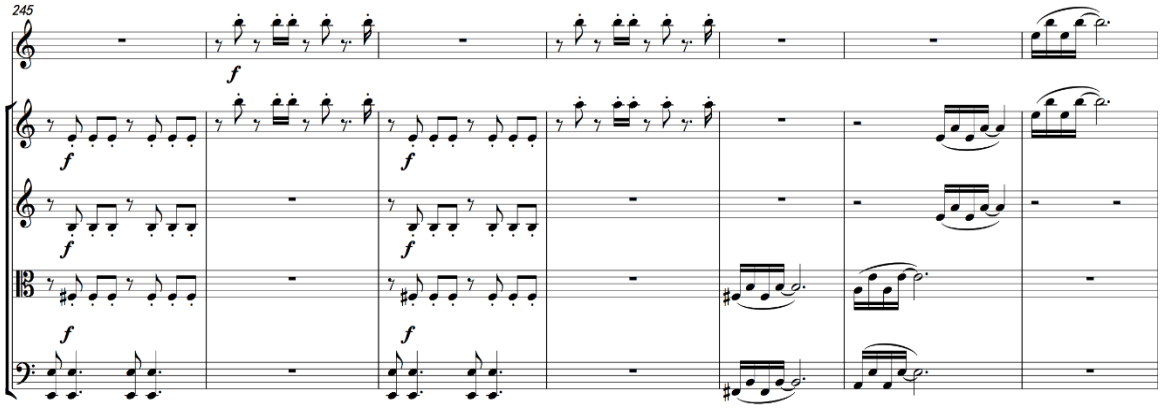
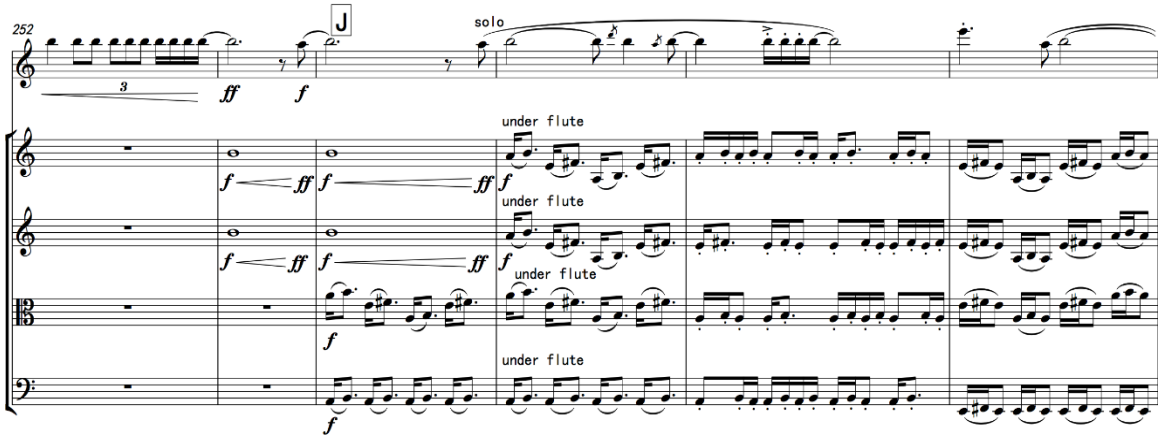

194
H
200
under flute
under flute
under flute
under flute
205

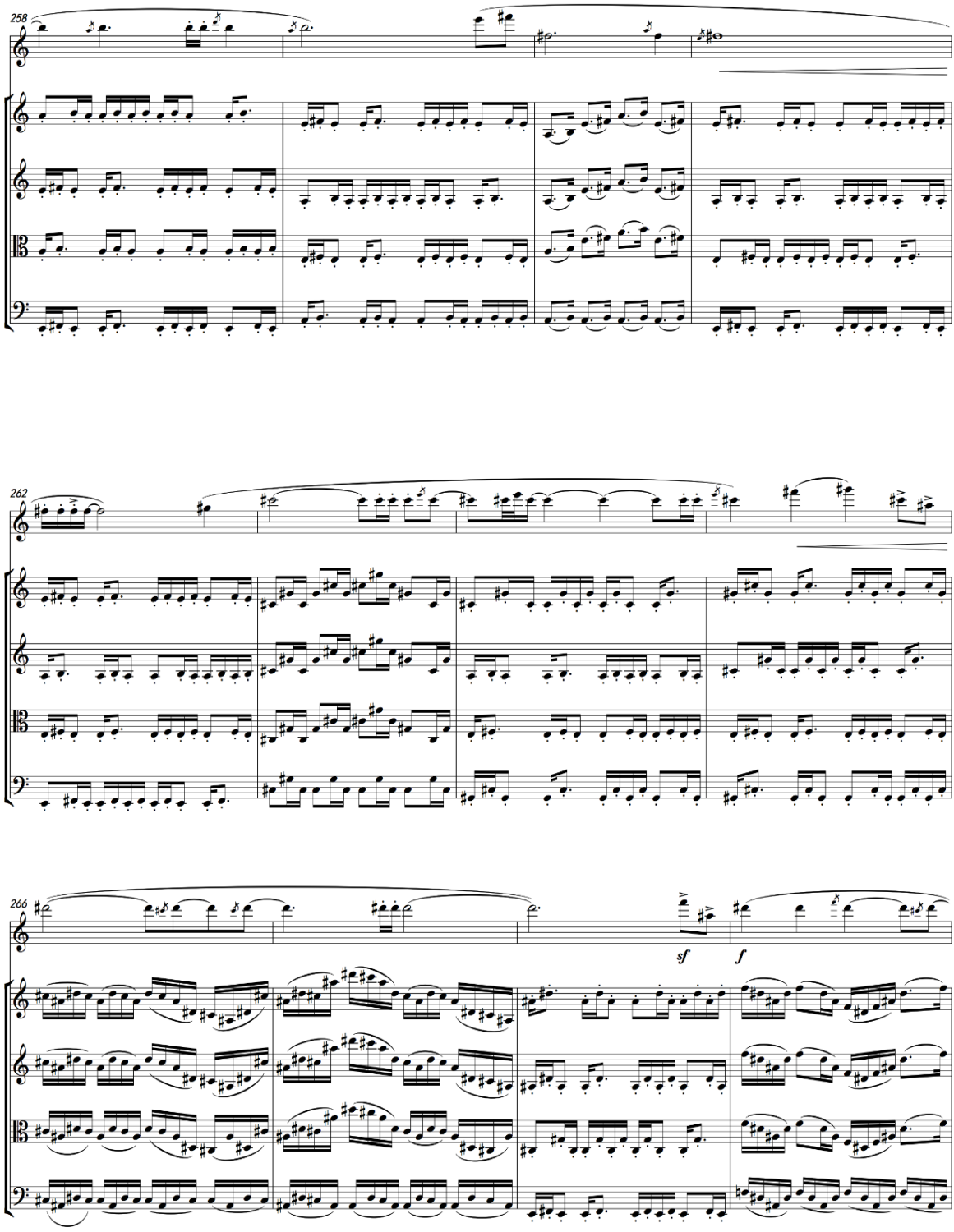

209
mf
213
f
217

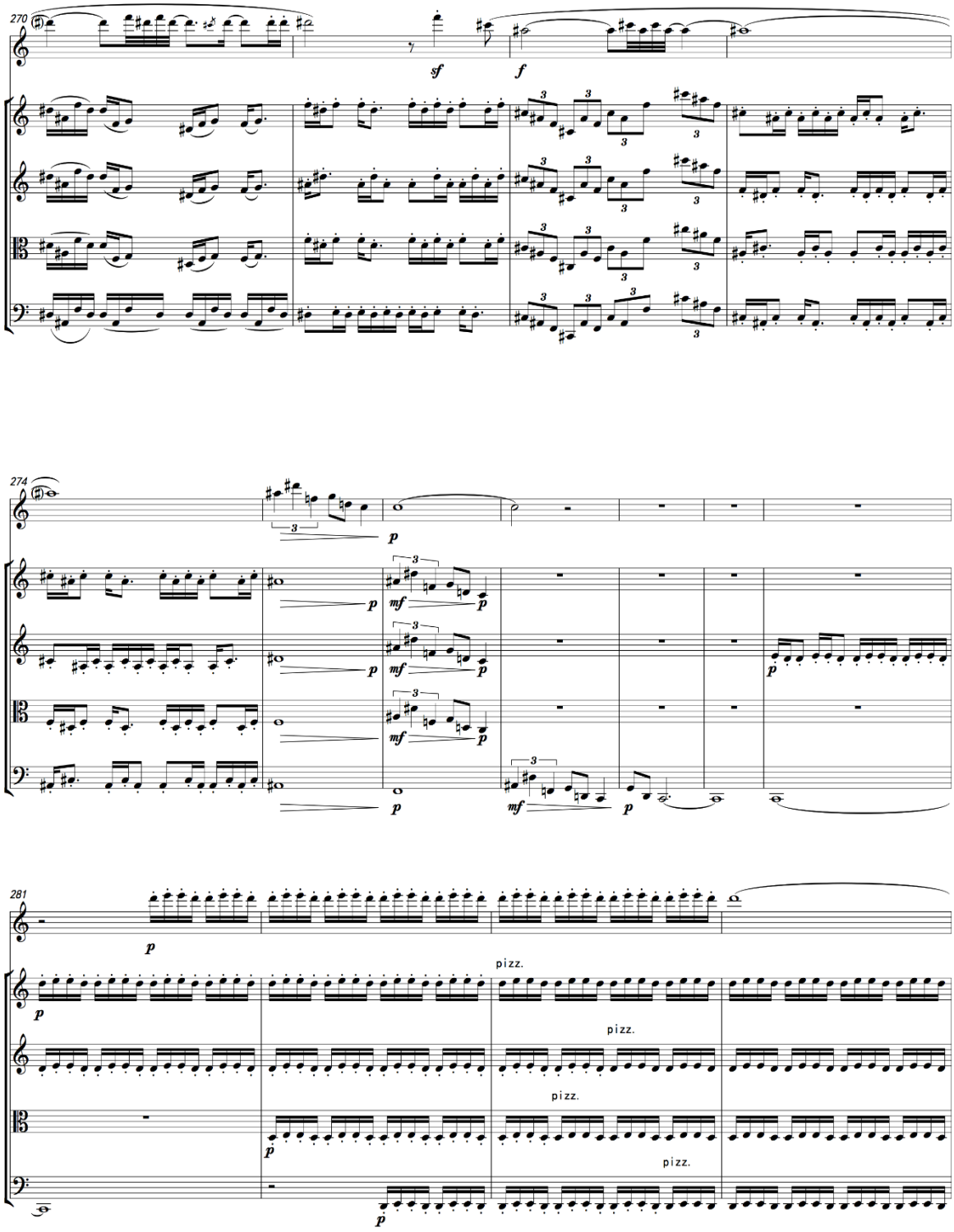

221
I
227
233

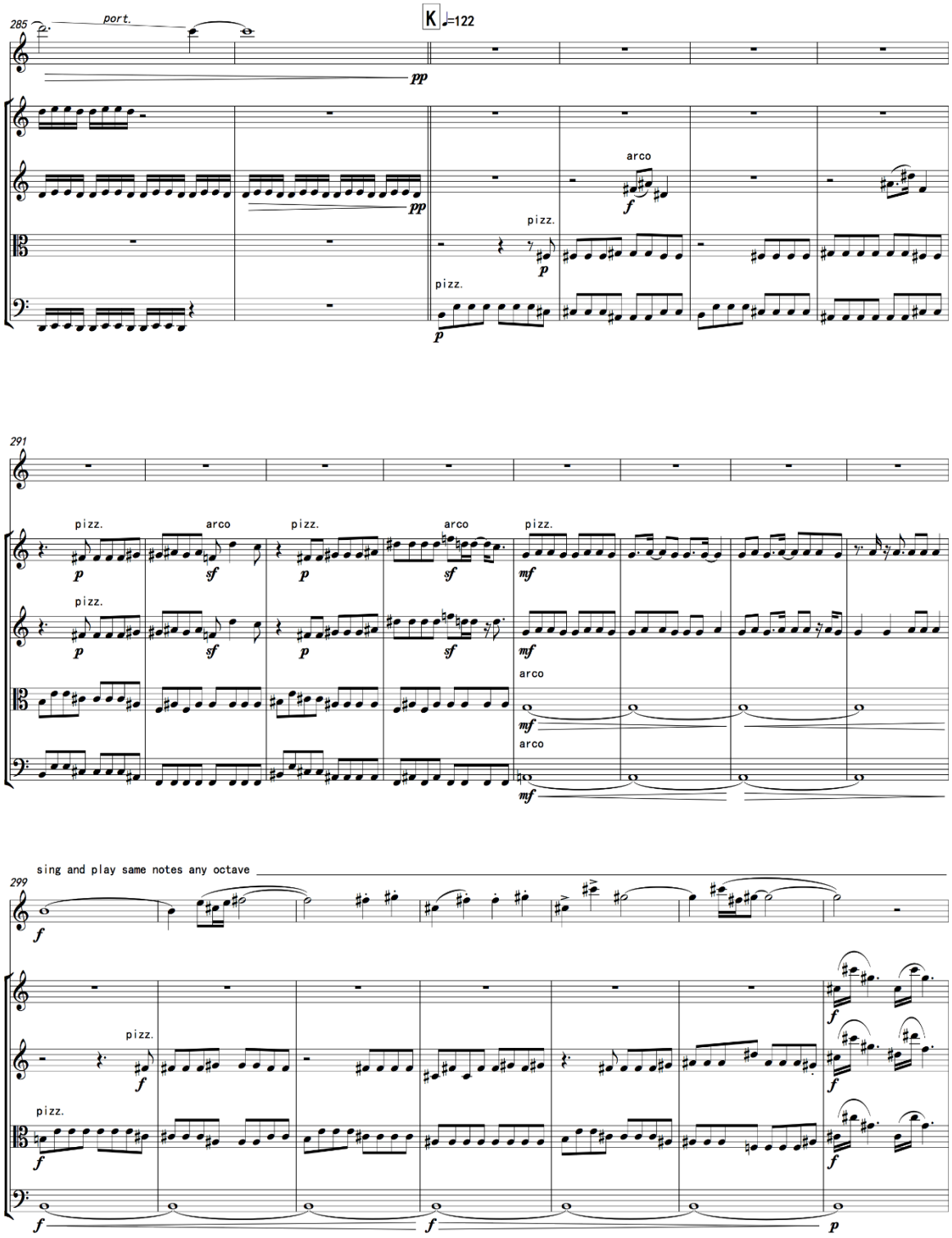

239
ff
p
7
f

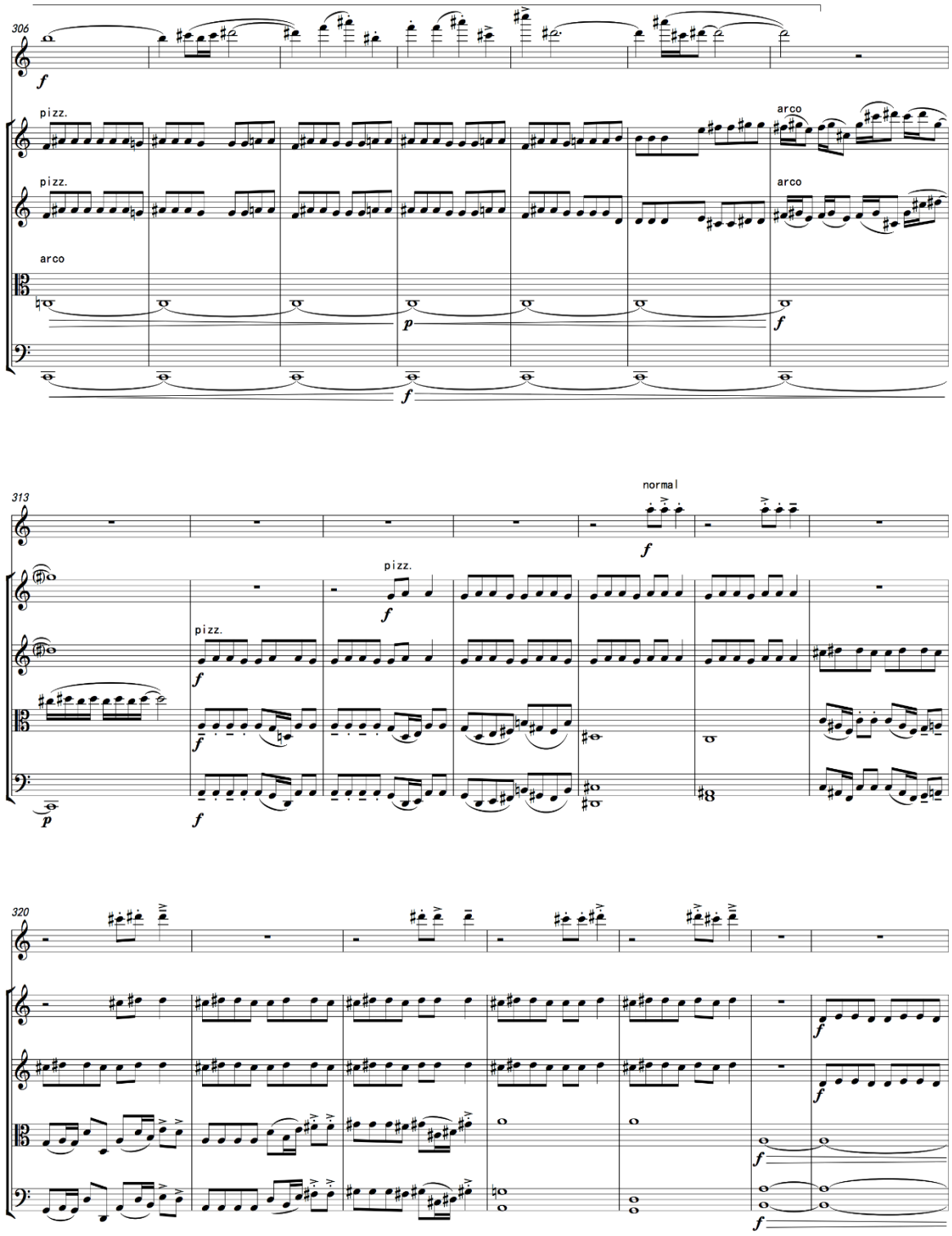

245
f

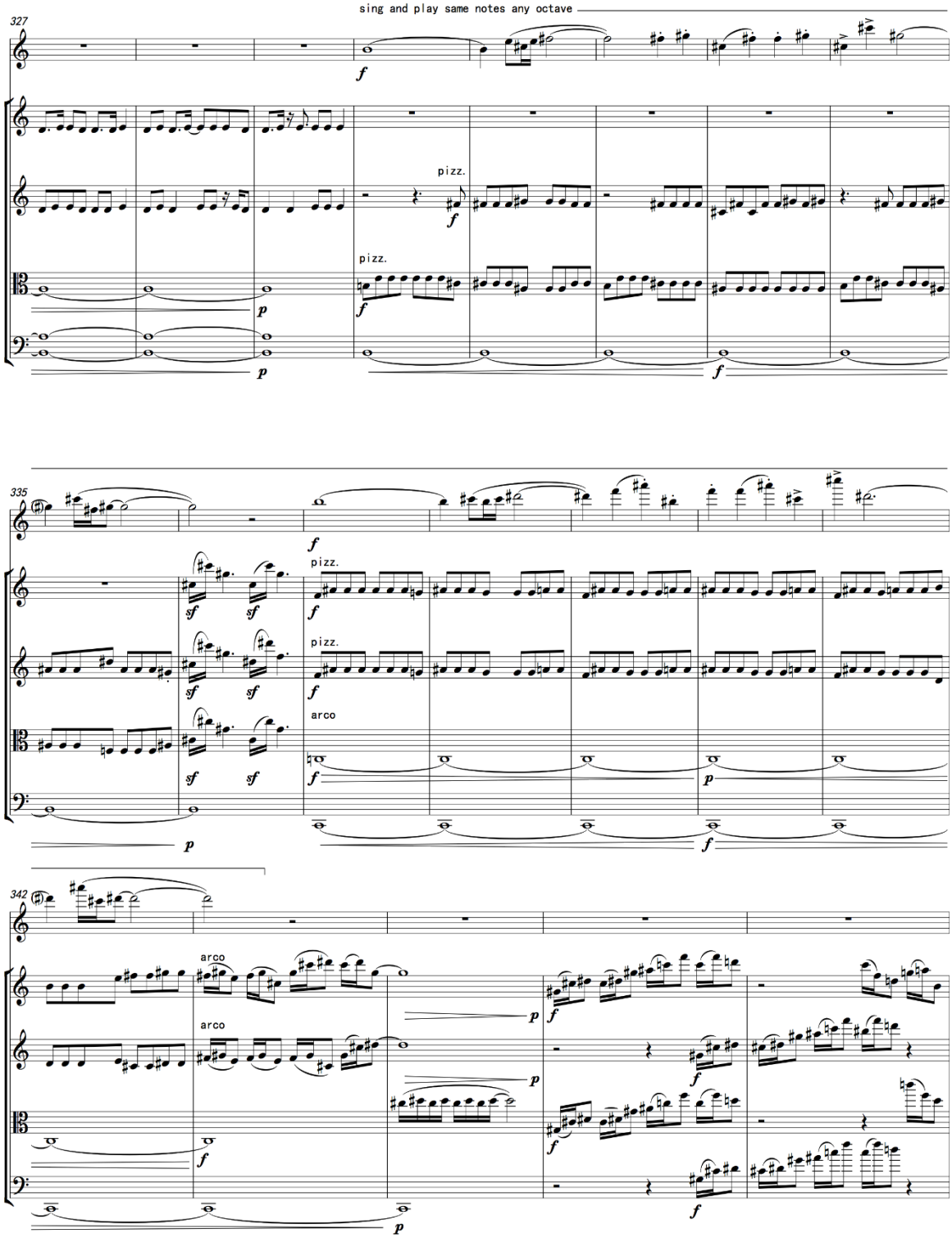

252
3
ff
f
J
solo
under flute
under flute
under flute
under flute

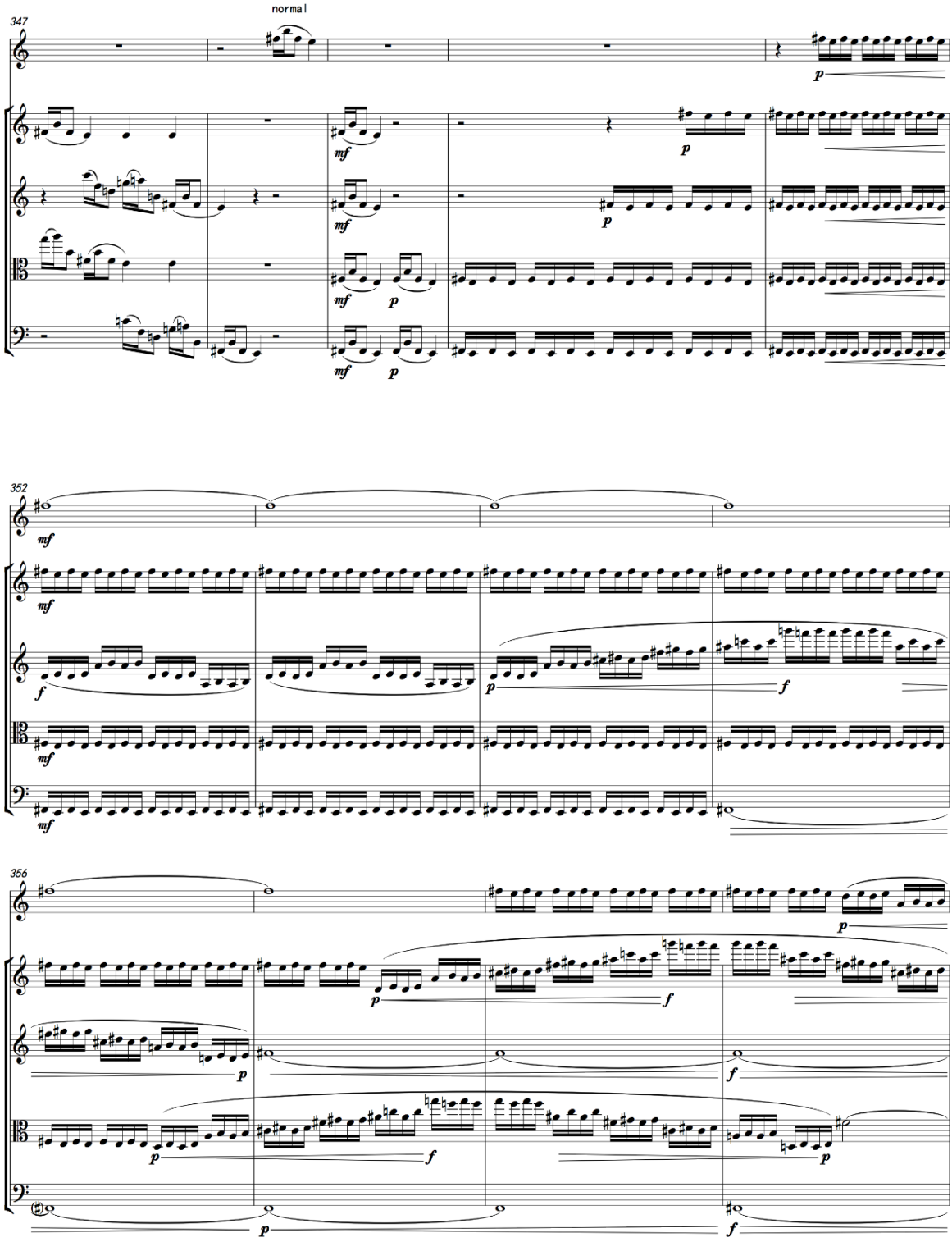

258
262
266
sf
f

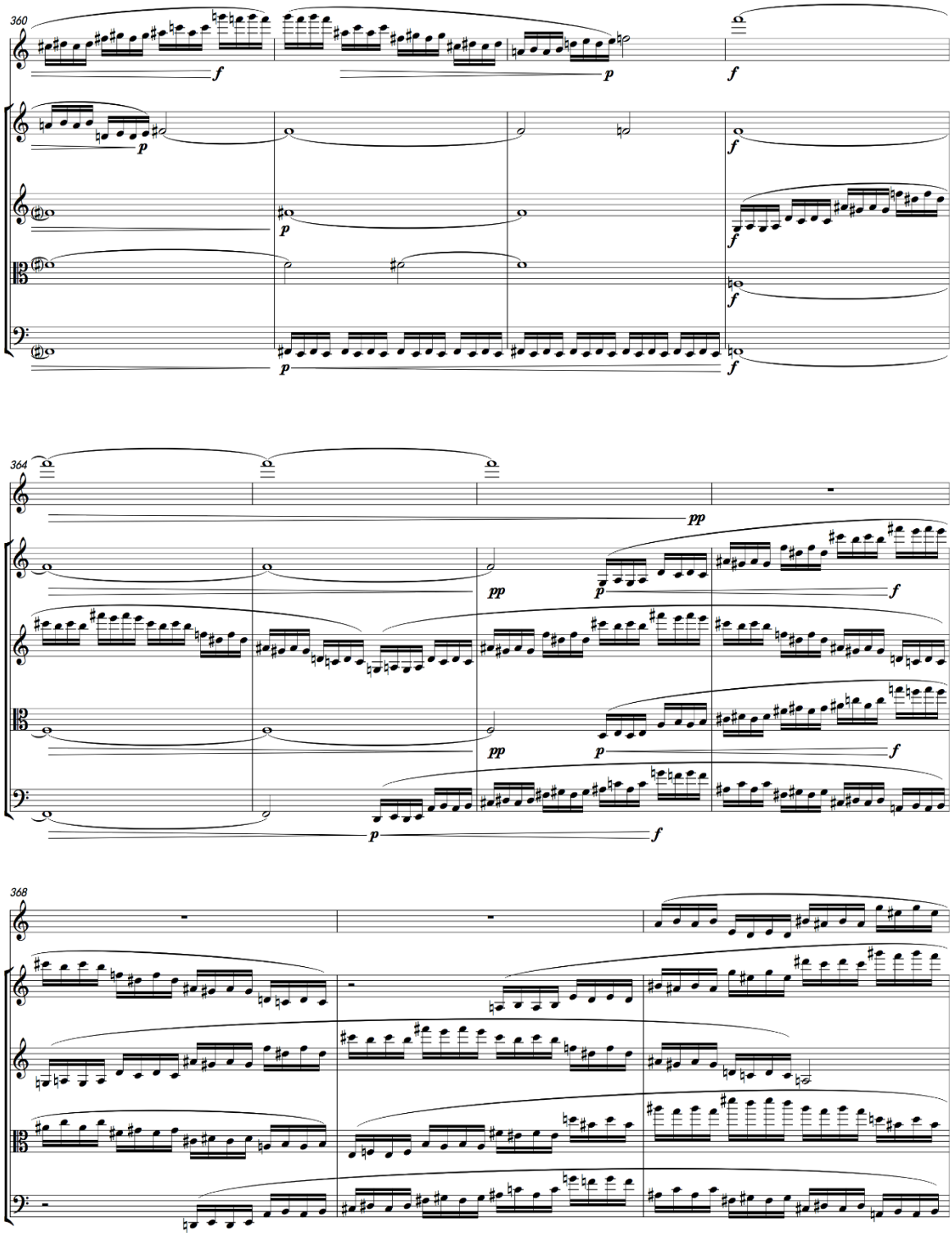

270
sf
f
274
p
mf
281
pizz.

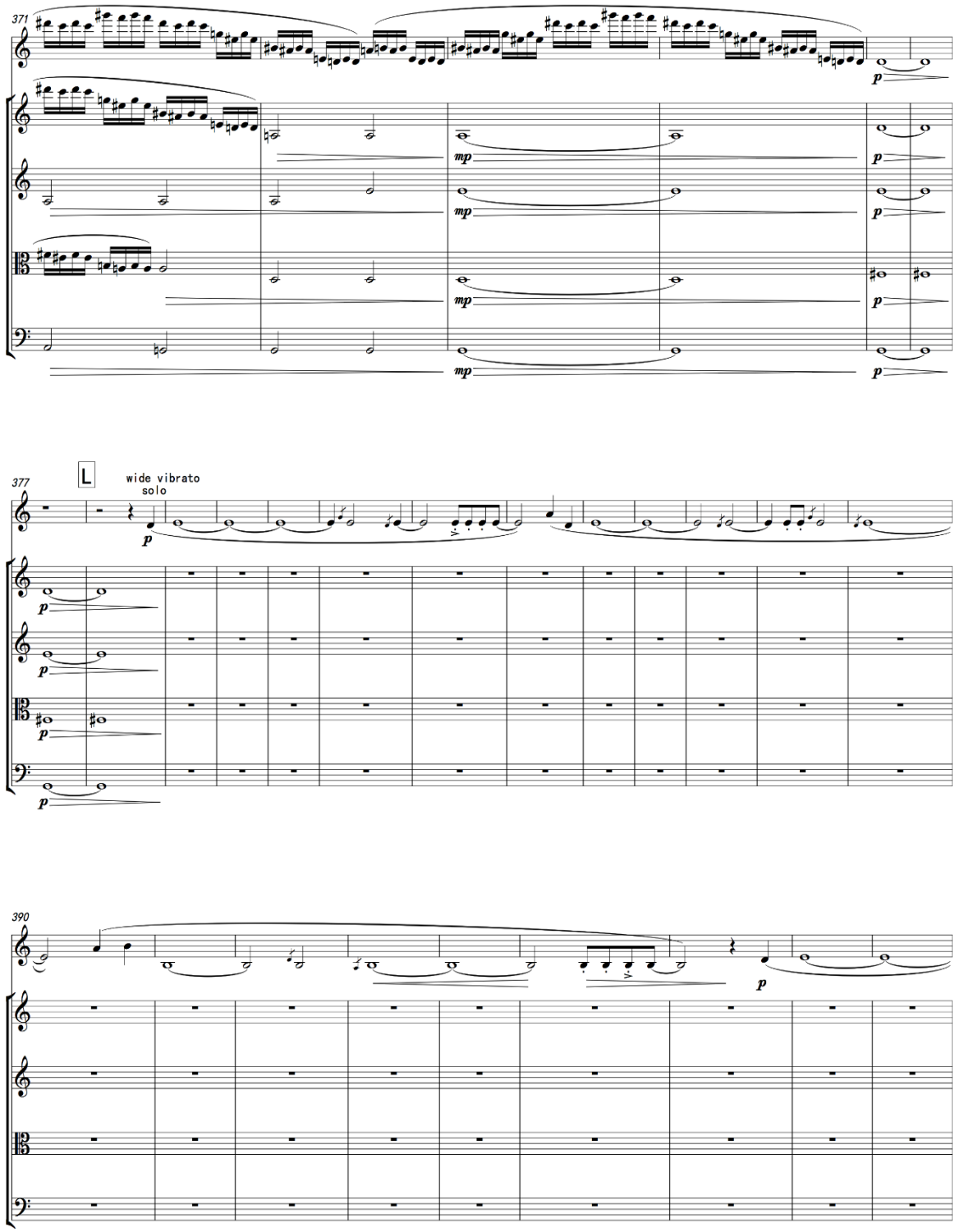

285
port.
K
♩=122
pp
arco
pizz.
291
sing and play same notes any octave
299

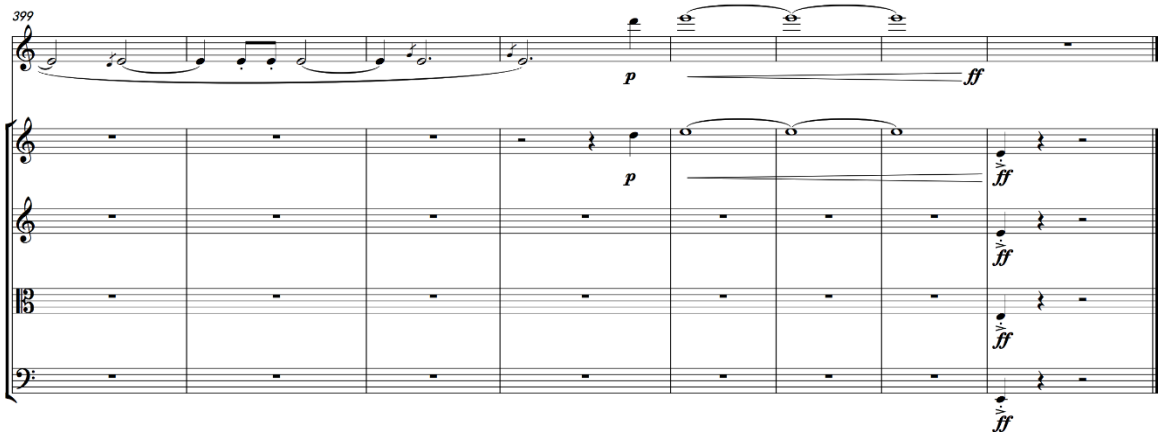

306
pizz.
pizz.
arco
arco
arco
313
normal
pizz.
pizz.
320


sing and play same notes any octave
327
pizz.
pizz.
335
pizz.
pizz.
arco
342
arco
arco


347
normal
352
356


360
364
368


371
377
L
wide vibrato
solo
390


399
p
ff
p
ff
ff
ff
ff